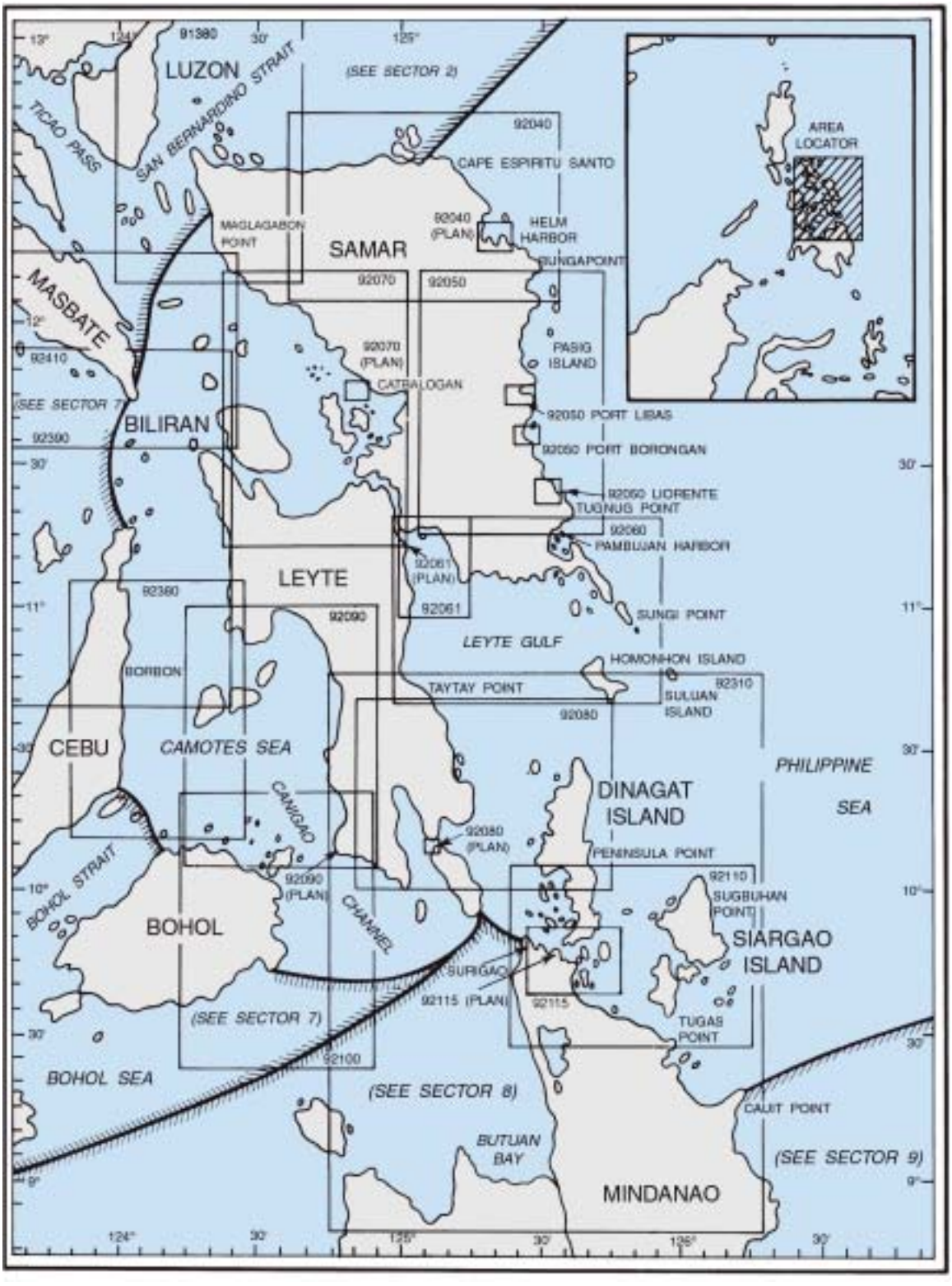
Select "See Sector" to be Hotlinked to that Sector



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR **6** —CHAR T INFORMATION

Table of Contents

Table of Contents

SECTOR 6

WEST COAST OF SAMAR, NORTH AND WEST COASTS OF LEYTE, NORTHEAST COAST OF BOHOL, AND EAST COAST OF CEBU

Plan.—This sector describes the E coast of Samar from Cape Espiritu Santo S, to and including Leyte Gulf, Surigao Strait, and the NE coast of Mindanao S to Cauit Point, including adjacent islands.

This sector also describes the E and S shores of the Samar Sea and the islands in its central part, the Camotes Sea and the islands therein, the NE coasts of Cebu and Bohol, and the W coast of Leyte.

General Remarks

6.1 Winds—Weather.—The climate in the area covered by this sector is typically warm and humid.

The two main seasons are the Northeast Monsoon from October to April, and the Southwest Monsoon from May to September. April and May is the transition period from winter to summer monsoon.

The area N of 10° N experiences spells of settled weather with high temperatures in April under the influence of the SE Trades from the West Pacific.

Fog is seldom encountered along the coast; also sea fog is rare. High temperatures prevail. Local land and sea breezes prevent extreme high temperatures at the ports.

The high temperature often occurs just before the onset of the sea breeze. The low temperature is reached around dawn. Most places endure high humidity and conditions become very oppressive at times, especially during the evening hours.

The predominate winds are of the Northeast Monsoon, which prevail from November to March, and the Southwest Monsoon, which prevail from June to September.

The winds are normally light to moderate, the average velocity being about 6 to 7 knots. Due to coastal configuration and high mountains, the wind direction on various parts of the coast may not always conform with the prevailing monsoon.

The weather on the E coast of Samar is considerable influenced by the large amount of rainfall, most of which occurs in November to January, during the Northeast Monsoon.

The maximum annual rainfall is about 3,559mm, of which about 50 percent occurs during the winter months.

There is no dry season. Much of the rain from April to September is with thunderstorms, which occur most often in the late afternoon and in the early morning at sea.

The annual mean temperature in the vicinity of this coast is about 26° C. The average monthly temperature ranges from about 25° C in February to about 27° C in August. The relative humidity ranges from about 80 to 88 percent.

The cloud amount is greatest on this coast in December and January and again in July, the latter probably because of the general cloudiness of the typhoon season. The clearest months are April and May.

Visibility may be reduced to less than 0.5 mile during heavy rain, but this is usually only for a few minutes at a time. Visibility of less than 5 miles occurs about 2 or 3 days a month during the monsoon seasons because of haze or mist.

On Cebu, November, December, and January are reported to be the most likely months for the occurrence of typhoons. They seldom, if ever, get so far S during the Southwest Monsoon season. They are least likely to occur in February during the Northeast Monsoon season.

Leyte is crossed by the average paths of 25 storms during October, December and May.

Between 8° N and 11° N, typhoons are slightly more frequent than farther S, and about 7 percent of more serious typhoons which affect the archipelago are experienced.

From 11° N to 13° 30'N, typhoons are frequent and destructive, this area experiences 19 percent of all typhoons.

The mean track of typhoons moves progressively N from February until the middle of August and then S again until January resulting in the W moving typhoons of winter and spring. They generally strike the region S of 15° N.

From January to March, that part of the area lying N of 11° N is almost, if not completely, immune from typhoons.

Typhoons are quite frequent and often destructive on the E coast of Samar. About 20 typhoons occur each year, and an average of about 4 of them are severe. Although they may be encountered any time of year, the typhoons season is from June to November.

The maximum typhoon activity occurs in September and early October, and the least activity is in the months of January through April. The typhoons dangerous to the Philippine Islands originate in the vicinity of the Caroline Islands.

During January, February, and March about 90 to 95 percent of the typhoons recurve to the NE as they approach the Philippines. In April about 75 percent recurve, and in May about 80 percent recurve.

In June and July about 65 percent recurve, and in the months of August through November about 60 percent recurve. In December about 65 percent of the typhoons recurve.

The typhoons which do not recurve but continue W across the Philippine Islands do so in the latitude of about 10° N, in December and January. In subsequent months the latitude of their tracks increase until August, when it is unusual for them to lie S of 18° N.

Storm and typhoon warnings are broadcast and signals are displayed at various ports throughout the Philippine Islands. Typhoon harbors of refuge on this coast Helm Harbor and Pambugan Harbor.

Tides—Currents.—The North Equatorial Current approaches the Philippines as a broad W flow across the Pacific. This current is at its strongest during the Northeast Monsoon with average velocities of about 1 knot in the latitude of Samar.

Towards Samar this current diverges. One branch flows SSW with some of the waters flowing through Surigao Strait into the Bohol Sea. Most of the current passes SE of Mindanao.

There are two principal flood tidal currents, coming from opposite directions, that are felt in the Camotes Sea and adjacent areas off Cebu, Leyte and Bohol.

One branch of the flood current coming from the N through the Samar Sea sets S between Cebu and Leyte into the Camotes Sea. Flood current from Suriga Strait enters the Mindananao Sea and sets W between Panglao Island and Siguijor Island, then branches as it nears the coast of Cebu and Negros.

The branch that sets N passes through the channel between Cebu and Bohol, and in a position 5 or 6 miles S of the Camotes Islands it meets the opposite flood current coming from the N. The meeting is reported as hardly noticeable. The ebb current sets in the opposite directions.

The flood current from the N sets E in the passage between Ponson Island, of the Camotes Islands group, and Calunangan Point on Leyte, and curves around the island and sets S.

Vessels approaching Suriago Strait from the W should keep well over toward Panaon Island to avoid being set toward Camiguin Island.

The currents in the Samar Sea are dominated by the tidal currents. The Pacific tide enters the Samar Sea from the N through the San Bernardino Strait and flows in a general S direction into the Visayan Sea. The flood currents sets s, and the ebb is N.

In the passes between the islands in the N entrance of the sea, the flood sets SSE and the ebb in the opposite direction at a velocity of about 4 to 8 knots through the E channels.

Between the Naranjo Islands and Masbate, the flood current sets SE and the ebb NW at a lesser velocity. Close S of the central and E part of the N entrance of the Samar Sea, the flood current sets SSW and the ebb NNE.

On the W side of the Samar Sea the tidal currents tend to parallel the Masbate coast, the flood sets SW and S and the ebb is in the opposite direction.

The tidal currents on the E side of the sea are presumed to set similarly parallel to the coast of Samar.

Between Tagapula Island and Almagro Island, in the central part of the sea, the flood current sets SW and the ebb NE. The tidal currents have considerable velocity in the wide deep channels between the larger islands and the coasts of Samar and Masbate.

In the SE part of the Samar Sea and through the SW entrance of the sea, the S setting currents have been reported to have a velocity of less than 0.5 knot and a little over 0.5 knot, respectively.

Observations taken midway between Malapascua Island and the N end of Cubu indicate that the flood current sets NW and the ebb SE.

In general, the bays and straits of Leyte are free of currents, but any exceptions are described with the related features.

Off the N coast of Bohol, strong variable currents occur in the vicinity of Danajon Bank. Off the E coast of Bohol the flood current sets N and the ebb current S through Canigao Channel between Bohol and Leyte.

The island of Leyte, between Cebu and Samar, is generally mountainous, but it contains several large and fertile valleys. It is the eighth largest of the Philippine Islands. Several of the mountains are the extinct craters of volcanoes and are covered with forests. The climate is hot and humid, but healthy.

Typhoons, although infrequent, do occur and cause great damage. The rivers are small and shallow, and are suitable only for small craft.

Samar is moderately high and densely wooded. It is sparsely populated and only a small part is cultivated.

The E coast of Samar is irregular and consists mostly of a low shore that is closely backed by hills with mountainous terrain inland.

Numerous bays and bights, encumbered with reefs, indent the coast and are separated by rocky points. Leyte Gulf occupies the large indentation S of Samar.

It has general depths of more than 37m, but there are a number of shoals and reefs in the W and NW parts. San Juanico Strait, navigable by small vessels, connects Leyte Gulf with Samar Sea.

The W coast of Samar is closely backed by hills and mountains, the summits of which attain a height of as much as 707m about 4.5 miles inland, but there are low coastal plains in the vicinity of the mouths of several rivers.

The N part of the coast is clear and unbroken, but the central and S parts are fringed with a number of small islands and become increasingly indented by small bays and bights. Several large shoal-water bays indent the S part of the coast.

The Libucan Islands and the Canahauan Islands are small groups that lie between about 3.3 and 6.3 miles off the central part of this coast. Daram Island and Buad Island are larger islands fronting the S part of this coast.

There are a number of comparatively small detached islands in the central part of the Samar Sea. They are all very mountainous and have summits from about 305 to over 914m high.

There are depths of about 91m to more than 183m in the W part of the Samar Sea through which the preferred shipping tracks pass, and of about 37 to 73m in the E part of the sea.

The steep-to islands in the central part of the sea have depths of more than 37m less than 0.5 mile offshore, but a few detached pinnacle rocks and shoals lie up to about 1.3 miles offshore.

Most of the coastal dangers are contained within the 20m curve, which follows the trend of the W coast of Samar at a distance of about 0.3 mile to 3.3 miles offshore, passes close westward around Buad and Daram Islands, and then follows the coastal trend about 0.3 mile to a little over 1 mile off the N coast of Leyte.

A few detached islets and shoal patches lie outside the 20m curve and up to about 0.5 mile off Daram Island and the smaller islands adjacent to it and Buad Island.

Several detached islets and rocks lie up to about 1.5 miles of the N part of W side of Biliran Island, and up to about 2.25 miles N of the NW end of that island.

The Libucan Islands and the Canahauan Islands are steep-to and have detached dangers up to about 0.8 mile off them, as well as between the two groups.

Large vessels frequently pass through the Samar Sea when bound to or from San Bernardino Strait and Cebu, Iloilo, or other ports in the S part of the archipelago.

Small inter-island vessels use San Juanico Strait, which separates Samar from Leyte, and connects the Samar Sea with Leyte Gulf.

Vessels proceeding through the Samar Sea, from San Bernardino Strait to the Visayan or the Camotes Seas, usually enter by Naranjo Pass which lies between Capul Island and the Naranjo Islands in the N entrance of the sea.

The track passes W of Destacado Island, the S islands in the N entrance, then trends S between the islands in the central part of the sea and the Masbate coast, and then through the SW entrance.

Northbound vessels frequently pass E of Destacado Island. At night or in bad weather, vessels bound N are advised to keep close to the Masbate coast and pass W around the Naranjo Islands.

The track through the Samar Sea for vessels using Dalupiri Pass, the easternmost and safest pass in the N entrance, trends SSW between Tagapula Island and Almagro Island, in the central part of the sea, and then S into the Visayan Sea.

Samar—Cape Espiritu Santo to Bunga Point

6.2 **Cape Espiritu Santo** (12° 33'N., 125° 11'E.) forms no projection from the coast but is conspicuous because of its height. The densely wooded mountains in the vicinity rise abruptly from the coast and attain an elevation of 451m less than 0.75 mile inland SW of the cape.

About 0.5 mile NW of this latter summit is another summit, 444m high, both being prominent from NE.

These mountains are visible for a distance of about 40 miles and make good landmarks for approaching San Bernardino Strait.

The mountains back the coast to a position SW of Dapdap Bay, and then to Sila Point, the coastal hills are about 91 to 222m high.

Palapag Mesa (12° 28'N., 125° 09'E.), a flat-topped ridge about 1.5 miles long, lies about 5.5 miles SSW of Cape Espiritu Santo. This ridge, which attains a height of 375m at its SW end and is 374m high at its NE end, is conspicuous because of its shape rather than its height.

Although prominent to vessels off the N coast of Samar, Palapag Mesa is concealed by higher mountains from vessels rounding Bacan Island and proceeding SE along the coast.

It cannot be seen again until a vessel is 2 or 3 miles SE of Sila Point.

A black conical rock, 46m high and conspicuous from seaward, lies on the edge of the coastal reefs about 4.5 miles SE of Cape Espiritu Santo.

Manjud Point (12° 28'N., 125° 17'E.) is formed by a spur that extends NE from the mountains island. The point rises perpendicularly from the sea to a height of 15.2m and then to a 167m summit less than 1 mile WSW. Some high rocks lie nearly 0.5 mile offshore about 0.5 mile NNW of the point.

6.3 **Sacamalig Bay** (12° 27'N., 125° 18'E.) is a bight that indents the coast between Manjud Point and Sila Point, about 4.5 miles SE. Canmanai Rocks, 6.1m high, are two rocks that lie about 0.3 mile off the NW side of the bay and about 1 mile SSE of Manjud Point. The SW shore is a sandy beach. Anchorage can be taken, in 18m, sand, about mile off the sandy beach.

Sila Point (12° 24'N., 125° 20'E.), 59m high, rises abruptly less than 0.5 mile inland to the 169m summit of the W and highest of three pyramidal hills; the latter hills are conspicuous from NW and SE.

A reef, on which there are numerous rocks, and shoal water fringe the point up to a about 0.3 mile offshore. A high rock and several pinnacle rocks lie on the edge of the reef N of the point.

Gamay Bay (12° 20'N., 125° 20'E.) indents the coast between Sila Point and Hiuinatungan Island, about 8 miles SSE. Although there is deep water, from about 13 to more than 37m close to the reefs fringing the shore, the bay is encumbered with many dangerous detached reefs, with depths of less than 1.8 or 3.7m, and over which the sea does not ordinarily break.

The numerous small bays and bights that indent the shore of the bay are separated by reef-fringed points.

Although the shores of the bay are low, they are closely backed by hills that attain heights of about 152m about 2 miles inland; these hills are backed by higher mountains farther inland.

Higunum Rock (12° 24'N., 125° 21'E.), a flat rock 7.9m high, over which the sea breaks in heavy weather, lies in the entrance of Gamay Bay about 1.5 miles SE of Sila Point.

Sora Cay, low and sandy, lies in the middle of the entrance of Gamay Bay about 3.5 miles SE of Sila Point. The islet changes shape after every gale and should be given a berth of at least 1 mile when passing E of it.

Canabayon Island (12° 20'N., 125° 20'E.), a low wooded islet with a sandy beach, lies on the W side of Gamay Bay about 4.5 miles S of Sila Point.

Gamay (12° 23'N., 125° 18'E.) is a small village that lies at the mouth of the Gamay River, which empties into Gamay Bay.

During the Southwest Monsoon, good anchorage can be taken, in 14.6m, mud, with the S entrance point of the river bearing 335°, distant nearly 0.75 mile. This anchorage is not safe with a swell from eastward.

6.4 **Helm Harbor** (12° 18'N., 125° 21'E.) indents the SW side of Gamay Bay between Barabod Point, low and covered with mangroves, and a point about 1 mile ESE.

Nanuntugan Reef and the shoal patches between it and the entrance points reduce the entrance channel to a width of about 0.3 mile.

Although not large, the harbor provides good typhoon anchorage for vessels of moderate size, in 8 to 9m, mud, about 0.5 mile SW of the E entrance point. As there are no navigational aids, strangers should enter the harbor at LW when the reefs are visible or when it is rough enough to cause breakers.

San Ramon Bay (12° 17'N., 125° 23'E.) indents the S side of Gamay Bay between Binarayan Island, about 2 miles ESE of the entrance of Helm Harbor and Hiuinatungan Island, about 0.8 mile farther SE.

The island is low and fringed by reefs. The narrow bay has depths of 10.5m to over 18.3m in its central part, but it is a little less than 0.5 mile wide between the steep-to reefs fringing the shore. Although the main entrance is on the W side of Hiuinatungan, vessels can enter through a narrower channel that passes along the E and S sides of that island.

A 1.2m patch lies on the S side of this latter channel S of Hiuinatungan Island. The small village of San Ramon is

situated at the head of the bay. A rock causeway is located at San Ramon.

Anchorage.—Vessels can anchor in the S part of San Ramon Bay, in about 9.1m, mud, about 1.3 miles SSW of Hiuinatungan Island. A branch of the bay extends NW from the central part of the bay and affords safe typhoon anchorage for small vessels, in 7 to 8m, mud, about 0.2 mile from the mangroves on the NE shore and 0.3 mile from the bushes on the NW shore.

Vessels should moor, using about 82.3m of chain, with the starboard anchor N, where the first blow comes from, and the port anchor S. Although this latter anchorage is confined, it is considered as good as Helm Harbor and is much easier to access.

Between Hiuinatungan Island and Bunga Point, about 9.5 miles SE, the coast consists of a low mangrove shore.

A high, level-appearing wooded ridge of hills backs this part of the coast and attains a height of 154m about 2 miles inland. A drying reef fringes this entire section of coast. The outer edge of the reef breaks continually.

Samar—Bunga Point to Anitaguipan Point

6.5 Most of the coast between Bunga Point and Anitaguipan Point is low and wooded. In many places the heavily-wooded coastal hills, about 30 to 122m high and which gradually increase in height southward, lie within 0.5 mile inland. They are backed by mountains that rise to elevations of more than 610m within 10 miles inland.

In the vicinity of Port Libas, the mountains approach the coast to about 1.8 miles inland at the head of that bay.

The coast is fronted by a drying coral reef which extends 1.5 miles offshore at the NW end and gradually narrows to 0.75 mile at the SE end.

Bunga Point (12˚10'N., 125˚30'E.), a low inconspicuous point bordered with mangroves, rises close NNW to a wooded ridge, 15.2m high.

A group of jagged boulders, up to 6.1m high and which are very prominent from NW or SE, lie near the edge of the steep-to coastal reef about 1 miles NE of the point.

Apiton Island, a wooded islet, lies about 0.5 mile SE of Bunga Point. The islet is fringed by a steep-to reef, on which there are numerous rocks, that extend up to about mile NE and about 0.3 mile SE from it. A rock, 19.2m high, lies on the edge of the fringing reef close off the SE end of the islet.

A detached 5.9m depth, over which the sea breaks heavily in bad weather, lies about 1.3 miles SE of Apiton Island.

Anchorage.—Anchorage, sheltered from E winds and sea, can be taken, in 18.3m, mud, about 0.3 mile off the steep-to SW side of Apiton Island.

6.6 **Tubabao Island** (12˚07'N., 125˚33'E.) lies in a position about 3 miles SSE of Aption Island. The island has a small village on its SW side. A wooded ridge, 31 to 32m high, extends the length of the island. There is good anchorage off the W side of the island, in depths of 18 to 30m.

Other islands, all low and covered with coconut trees or bushes, extend S for 7.75 miles to Fulin Island, the S island of the group. These islets all lie on a reef, which is narrow at its N end and gradually widens until it extends 1 mile E and S of Fulin Island. A light is shown about 0.3 mile NW of the N extremity of Fulin Island.

Pasig Island (11˚58'N.,125˚32'E.),lying about 3 miles SSW of Fulin Island, is a detached islet located on the W side of a partly drying reef, on which there are a number of above-water rocks.

This reef is fringed up to about 0.5 mile by shoal water, beyond which there are depths of more than 18.3m.

A prominent wreck lies on the NE edge of the reef. An 11.9m patch lies about 1 mile NE of Pasig Island.

Between Bunga Point and Cabra Point, about 6.5 miles S, the coast recedes to form a bight that is much indented by small bays and inlets and at the head of which lies Oras Bay.

The shores are mostly low and closely backed by detached hills, up to about 61m high, behind which are the higher coastal hills. There are many detached below-water reefs which extend up to 1 mile offshore.

6.7 **San Policarpo Bay** (12˚11'N., 125˚30'E.), a confined reef-fringed cove with numerous coral heads, lies on the W side of Bunga Point.

The best channel into this cove is on the W side of some reefs that lie up to about 0.5 mile SSW of Bunga Point.

Anchorage can be obtained in the middle of the bay, in a depth of 9m, with Bunga Point in line with the N extremity of Apiton Island bearing 104˚.

Several other small bays lie between San Policarpo Bay and Ludo Point, a low point about 2.5 miles SW.

Although there is deep water close in to the reef-fringed shore, these latter bays are fronted by a number of shoal patches, with depths of about 0.6 to 4.5m, that lie up to about 1.3 miles offshore.

Oras Bay (12˚07'N., 125˚27'E.) indents the coast between Ludo Point and Bankari Point, about 2 miles S.

Both of the entrance points are fringed with reefs that extend up to about 0.8 mile offshore.

The small town of Oras is situated on the N bank of the mouth of the Oras River, which empties into the NW end of Oras Bay. The channel at the river mouth is constantly shifting and suitable only for small craft. There is small pier and a warehouse at the town.

6.8 Between **Cabra Point** (12˚04'N., 125˚31'E.), prominent and steep-to, and Paninihian Point, about 16 miles SSW, the coast forms a bight that recedes about 4 miles W.

The **Dolores River** (12˚02'N., 125˚29'E.) empties into the sea about 2.3 miles SW of Cabra Point. A channel over the bar, at the river mouth, has a least depth of about 2.1m at HW. The town of Dolores, from which a moderate amount of lumber is exported, is situated on the N bank just inside the river entrance.

Vessels can obtain anchorage NE of the river mouth, in a depth of about 9m, mud and sand.

The **Ulut River** (12˚00'N., 125˚27'E.) empties into the sea about 3 miles SW of the Dolores River. Only small boats can cross the shallow bar at the entrance.

From a position about 1.5 miles SSW of the Ulut River, the coast trends about 6 miles S to Pindilin Point. The low and mostly wooded coast is backed less than 0.5 mile inland by hills, about 33 to 68m high.

Taft (11°54'N., 125°25'E.) is a small town situated on the S side of the mouth of the Tubig River, which empties into the sea about 5.75 miles SSW of the Ulut River.

The bar at the river mouth has a depth of 1.8m at LW. Tugasan Point is the low N entrance point of the river mouth. A reef extends 0.5 mile ESE from the point.

Anchorage.—The usual anchorage for Taft is nearly 1 mile E of Tugasan Point, in 18.3m, mud, with the town bearing 270° and Pindilin Point bearing 181°. This anchorage is frequently untenable during the Northeast Monsoon.

Pindilin Point (11°52'N., 125°27'E.) is a low point fringed by a reef that extends about 0.5 mile NE. The coast in this vicinity consists mostly of a sandy beach backed by coconut trees.

Between Pindilin Point and Taig Point, about 3.3 miles SSE, the coast is fronted by several islands. The channels between the islands and also between them and the mainland are so encumbered with reefs and shoals that they are suitable only for boats.

Makate Island is a wooded islet that lies about 1.5 miles ENE of Pindilin Point. A dangerous 5.8m pinnacle, which breaks heavily in bad weather, lies about 1.3 miles NE of the islet.

Catalaban Island, the largest of these islands, lies about 0.8 mile S of Makate Island. The E and W ends of the island are about 30m high and are separated by a low isthmus. Macalayo Island, 26m high, and Anajao Island, low and wooded, are two islets that lie about 0.3 mile N and 0.5 mile S, respectively, of the W end of Catalaban Island.

6.9 Sulat Bay (11°50'N., 125°28'E.), open to E, lies between Catalaban Island and Taig Point, 2 miles S.

A 0.9m dangerous patch lies about 0.8 mile SE of Anajao Island, close to the reef off Taig Point.

Taig Point is conspicuous because of a drying reef that extends about 1.3 miles NE. There are four rocky islets, up to 9.4m high, on this reef. The town of Sulat, at which there is a post and telegraph office, is situated at the mouth of the Sulat River on the W side of Taig Point.

The ruins of a church, within which there is a nipa edifice, are conspicuous at the town.

Anchorage.—Vessels can anchor in Sulat Bay, in 9m, mud, about 0.8 miles N of Taig Point, with the ruined church at Salat bearing 195°; inside this position depths shoal rather abruptly. When a heavy sea sets in during the Northeast Monsoon, this anchorage is untenable and better anchorage can be taken in the N part of the bay.

Caution.—Care should be exercised when entering Sulat Bay to avoid the above-described dangerous 0.9m patch.

6.10 Paninihian Point (11°48'N., 125°28'E.), lying about 1.5 miles SE of Taig Point, is the E extremity of the broad projection of the coast that separates Sibut Bay from Port Libas. The reef extending from Taig Point continues S and fringes Paninihian Point and **Cannomanda Point** (11°46'N., 125°28'E.), the N entrance point of Port Libas, where it extends 0.3 mile offshore. It has many large boulders on it and is steep-to.

Port Libas (11°46'N., 125°26'E.) indents the coast between Cannomanda Point, about 1.5 miles SSW of Paninihian Point, and Najibil Point, nearly 1 mile farther S. Both points are low, and fringed by steep-to reefs and foul ground.

The low shores of the bay are much indented by shallow low reef-fringed coves that are separated by points, fringed with drying reefs. Hills, about 67 to 111m high, closely back the shores, and there are higher hills and mountains, over 305m high, within about 2 miles W of the head of the bay.

Magnana Point (11°46'N., 125°26'E.), on the SW side of the bay, is conspicuous because of two, steep conical hills, of which Mount Magnagua, the higher and eastern hill, rises to a summit about 0.5 mile SW of the point. Tubigan Point is on the N shore of the bay about 0.5 mile NNE of Magnana Point.

A pier, serviced by an aerial tramway having numerous one-ton buckets, is located at Port Libas. Ore can be delivered to the pier at a rate of 65 tons per hour.

Anchorage.—Anchorage can be taken, in 9.1m, mud, about 0.5 mile E of Tubigan Point. In good weather, with a smooth sea, small vessels can go farther into the bay and anchor in 4.6m, sand, between Tubigan and Magnana Points.

Directions.—When entering Port Libas from a position 1 mile offshore, steer with Mount Magnague in line with the depression between the horns of a saddle-topped mountain in the interior, bearing 250°, which leads midway between the reef extending S from Cannomanda Point and the foul ground on the S side of the entrance.

When San Julian begins to open W of Palan Point, steer for Tubigan Point, which leads to the anchorage.

Between Najibil Point and Anitaguipan Point, about 5.5 miles ESE, the low coast is backed about 2 miles inland by hills, 116 to 128m high

Samar—Anitaguipan Point to Sungi Point

6.11 Anitaguipan Point (11°40'N., 125°30'E.) is a well-wooded rocky headland that somewhat overhangs the sea.

Capinas Point, 0.75 miles further SW, has a reef extending 0.4 mile SE from it.

Napla Bay (11°39'N., 125°28'E.) indents the coast between Capinas Point and Andis Island, about 1 mile S.

Numerous small shallow coves indent the bay, and there are several villages on its shores.

Anchorage.—Good anchorage can be taken in the middle part of the bay, in about 11.4m, mud, except when heavy seas often set in during the Northeast Monsoon.

Amogotada Point (11°39'N., 125°29'E.), lying 1 mile S of Capinas Point, is a rocky headland at the NE end of the island. A detached 4.6m patch, over which the sea breaks in heavy weather, lies about 0.3 mile S of the S end of the island. The low SW side of the island is fringed by a narrow drying reef that is steep-to.

6.12 Port Borongan (11°36'N., 125°26'E.) (World Port Index No. 58640) occupies a bay that indents the coast between Andis Island and Divinubo Island, about 1.8 miles SSE. A coral reef extends 0.2 mile from the E side of Andis Island. The town of Borongan is situated at the head of the port.

A few hills, up to 93m high, closely back the low and wooded shores of the NW and S sides of the bay, and higher hills lie about 1 mile or 2 miles inland from the head of the bay.

Although open to eastward, from which direction swells set in during the Northeast Monsoon, the bay affords shelter in the lee of Andis Island.

Caution.—A 4.6m shoal in which the sea breaks in heavy weather lies 0.2 mile SW of the S point of Andis Island. A steep-to, rocky shoal, awash, lies 1.25 miles WSW of the same point. Breakers mark the point when the sea is calm.

6.13 Divinubo Island (11˚36'N., 125˚30'E.), which is about 27m high, marked by a light and appears flat, lies on the S side of the entrance of Port Borongan.

Candamat Reef (11˚36'N., 125˚26'E.), which dries at LW, extends about 0.5 mile ENE from a point that projects E from the head of the bay westward of Divinubo Island. The reef was reported to have extended about 0.1 mile farther NE than charted.

Tides—Currents.—The tides at Port Borongan are predominantly semidiurnal. The mean range of the tide is 1.2m, and the diurnal range is 1.5m. The lowest LW falls as much as 0.4m below chart datum of MLW.

The head of Port Borongan consists of a sandy beach that extends about 1 mile N and about the same distance SSE from the point from which Candamat Reef extends.

The town of Borongan is obscured by coconut trees, but its location is indicated by the breakwater and pier on the N side of the point.

A 183m long breakwater, reported partially in ruins, extends NW from the root of Candamat Reef.

A pier, about 73m long and 12m wide, extends NNW from the head of the breakwater. Depths of 4.9 to 5.5m alongside and 11m off the head were reported. Reefs lie along the outer face of the breakwater and on both sides of the inner part of the pier.

Anchorage.—Anchorage can be taken, in about 16.5m, mud, about 0.5 mile SSW of a small reef, which breaks.

The anchor can be dropped when the reef bears 025˚ and a wooded islet bears 300˚. The islet is located close to the NW shore, about 0.8 mile N of Candamat Reef.

This anchorage is untenable during the Northeast Monsoon. Anchorage can be taken closer in to the breakwate, in about 11.4 to 12.8m, mud, about halfway between the above wooded islet and Candamat Reef. This latter anchorage can be used only in good weather when there is not too much swell.

During the Northeast Monsoon, the best anchorage is in the N part of Port Borongan about 0.3 mile offshore and SSW of the NW end of Andis Island, in 18.3 to 21.9m, mud, with Anitaguipan Point just open of the latter extremity of the island.

This anchorage does not afford protection during typhoons because of heavy seas that make in around the S end of Andis Island.

6.14 Lalawigan Point (11˚35'N., 125˚29'E.), located close W of Divinubo Island, the coast trends about 5.75 miles SSE to the Maydolong Islands and consists of a steep-to sandy beach, which becomes rocky and closely fringed with reefs toward the latter islands.

The Soribao River, which has a depth of about 0.6m at its mouth, empties into the sea about 2.8 miles S of Lalawigan Point.

Maydolong Islands (Maiduun Islands) (11˚30'N., 125˚31'E.), two wooded islets, lie a about 0.3 mile offshore. They are located on a drying reef that extends about 0.8 mile NE from the mainland.

The E edge and N end of the reef lie about 0.3 mile ENE and about 0.5 mile N of the islets, but a narrow submerged part of the reef extends about 0.5 mile farther N. This dangerous reef is steep-to and should be given a wide berth.

Maydolong Cove recedes about 0.8 miles S between the above reef and the coast W. There are depths of about 11 to 21.9m in the cove, but some detached reefs lie on the E side of its central part. Small vessels can take fair but confined anchorage in Maydolong Cove.

Minasangan Island (11˚29'N., 125˚31'E.), about 2 miles S of Maydolong Islands, is an islet located on a steep-to reef that extends about 0.8 mile from the coast and over the E end of which the sea usually breaks heavily.

Cabay Bay (11˚28'N., 125˚31'E.), a narrow inlet with the village of Cabay at its head, indents the coast about 2 miles SW between Minasangan Island and a point about 1.3 miles S.

Hills up to 139m high rise abruptly from the shore at the head of the bay, and somewhat lower hills lie close S of the S entrance point. Several shoals, with depths of 3 to 5m, lie within 0.3 mile of the S shore.

A somewhat confined anchorage, exposed to the NE, can be taken in Cabay Bay.

Minanut Island (11˚26'N., 125˚33'E.), the NE side of which consists of cliffs about 30m high, is an islet that lies about 2.5 miles SE of Minasangan Island and about 0.3 mile E of Sang Miguel Point, a low point. It is fringed within 0.25 mile by a steep-to reef, which is separated from San Miguel Point by a deep but very narrow channel.

Minanut Anchorage (11˚26'N., 125˚33'E.) has depths of about 16.5 to 20.1m in its central part, but the shores are fringed up to about 0.2 mile off by steep-to reefs and several detached patches. It affords protection from NE, but is not recommended during the typhoon season nor when the Northeast Monsoon is strong.

During a heavy NE sea, while the cove is absolutely smooth, breakers on the reefs at the N entrance fill it with foam and send in a strong current, which quickly reverses itself with the receding waters.

These currents make a vessel swing sharply and cause sudden heavy strains on the anchor. Anchorage can be taken about 0.2 mile WSW of the SW end of Minanut Island in 16 to 18m, mud, with the SE end of the island bearing 086˚ and San Miguel Point bearing 350˚.

Vessels entering the anchorage should approach from E and pass about 0.3 mile S of Minanut Island, being careful to avoid the reefs on either side. As soon as San Miguel Point opens W of Minanut Island, change course to the NW and steer for the anchorage. The N entrance is not recommended.

On the SW side of Minanut Anchorage and just SE of a rocky bluff, there is a good boat landing in a break in the reef; there is a deep cave on the NW side of the bluff.

The **Lanang River** (11˚25'N., 125˚33'E.), the mouth of which is shallow, empties into the sea about 1 mile SW of the SE end of Minanut Island.

The E entrance point is low, wooded, and fringed up to about 0.2 mile offshore by a steep-to reef. A sandy beach lies between the low W entrance point of the river and a rocky point about 1 mile SSE. The latter point extends about 0.5 mile NE from the coast and is closely fringed by a steep-to reef, on which there are several islets.

Llorente (11° 25'N., 125° 33'E.) is a village on the S side of the mouth of the Lanang River. The ruins of a church, several buildings, and a tall flagpole are visible from seaward, the latter being the most conspicuous. Coastal vessels call here to load hemp and copra.

Anchorage can be taken in 18m, sand, about 1 mile E of the mouth of the river, and small vessels can anchor closer in to the town, in about 12.8m, sand. These anchorages are open to the E, and at times they are untenable during the Northeast Monsoon.

Iniyao Island (11° 24'N., 125° 34'E.) is a rocky islet that lies about 0.3 mile offshore in a position about 1.8 miles SE of Minanut Island. It appears like many of the high rocky points and is situated on the N end of a drying reef that extends N from the coast.

From Iniyao Island to Tugnug Point, about 4.3 miles SE, the coast is indented by several small bights and consists of rocky cliffs, 12 to 27m high.

Heavily-wooded hills, about 91 to 152m high, back this coast a short distance inland. Reefs extend up to 0.25 mile offshore.

6.15 Tugnug Point (11° 21'N., 125° 38'E.), high and cliffy, has a very small cove on its S side. The point is in the middle of the E side of a bluff headland that rises to a height of about 61m a short distance inland, and is prominent from N and S. Sheer cliffs, 8 to 15m high, continue for about 1 mile S to Agdan Point, the SE end of the headland.

Agdan Point (11° 20'N., 125° 38'E.), a bluff headland, rises to an elevation of 60m to the tops of the trees a short distance from the cliffs. The point is prominent from N or S.

Nagaha Bay (11° 20'N., 125° 38'E.), the low shores of which are fringed up to about 0.3 mile offshore by steep-to reefs and shoal water, is a small bight between the SW side of Agdan Point and Panadlihan Point.

During fine weather, anchorage can be taken in the middle of the bay, in 29m about 0.3 mile SW of Agdan Point.

Panadlihan Point, 15.2m high and cliffy, lies about 0.5 mile SW of Agdan Point. It is steep-to and has depths of more than 36.6m within about 0.3 mile SE.

The low coast between Panadlihan Point and Bura Point, about 1.5 miles SSW, is fringed up to about 0.5 mile offshore by a steep-to reef; depths of more than 37m lie close off the reef.

Bura Point (11° 18'N., 125° 37'E.) is low and wooded. It terminates in a line of black rocks, 6 to 9m high, and is prominent. Beyond these rocks the point is steep-to and has depths of more than 37m about 0.3 mile SE, but a reef extends up to about 0.5 mile from the coast immediately SW of the point. This latter reef fringes the coast to a position about 1.3 miles WSW of Bura Point.

The low coast in the vicinity of Bura Point is backed about 0.5 mile inland by hills, 68 to 121m high. A wooded ridge of hills, 281 to 288m high, backs the coast about 1.5 miles inland between a position NW of Bura Point and the hills on the NW side of Matarinao Bay.

6.16 Matarinao Bay (11° 14'N., 125° 34'E.) occupies a bight that indents the coast between Bura Point and Matarinao Point, about 4.3 miles SSW. Although much of the bay is encumbered with dangerous reefs, it is the largest and most easily accessible of any on the E coast of Samar.

Matarinao Point (11° 14'N., 125° 35'E.), with the village of Matarinao on its N side, forms the S entrance point of Matarinao Bay. It is the NW end of a peninsula that extends about 2.5 miles NW from the mainland and is conspicuous as the N termination of the bold wooded ridge, about 122m high.

The ridge extends almost the entire length of the peninsula from Matarinao Point to Sungi Point, being broken in several places by steep gaps. Its general appearance is one of uniform height and a vertical seaward side that is over 91m high and parts of which are bare.

The ridge is only about 0.1 to 0.2 mile wide. The coast consists of sandy beaches and coral bluffs.

A low narrow wooded belt, less than 0.75 mile wide, lies between them and the ridge.

There are numerous above and below-water dangers in Matarinao Bay, and the entrance is a little less than 0.5 mile wide between the reefs on both sides. Most of the reefs on each side of the entrance partly dry and are marked by breakers.

Lalauigan Island (11° 17'N., 125° 34'E.), 81m high, lies on the N part of a reef about 2.5 miles SW of Bura Point and can be seen over the latter from a position off Panadlihan Point. Capocpocanan Island, low and wooded, lies about 0.5 mile SW of Lalauigan Island.

Anahao Island is a low and wooded island that lies close SW of Capocpocanan Island. From the entrance channel this island appears like a low point.

A detached, steep-to 7.3m patch lies in the middle of the entrance channel a little less than 0.5 mile SE of Anahao Island. An obstruction, with a depth of 12.8m, is located about 1.8 miles N of Matarinao Point.

Pou Rock is a small black rock that lies about 0.8 mile WNW of Matarinao Point. It is located on a small sand cay at the SE end of a reef, which has depths of more than 11m, less than 0.5 mile off its W and S sides.

Minaloa Island is a round-topped islet that lies almost 1.5 miles W of Matarinao Point. It is the highest island on the S side of the entrance channel. Minadion Island, a low and wooded islet, lies on a steep-to reef about 0.8 mile WSW of Minaloa Island.

Most of the W shore of Matarinao Bay is very low and wooded, but hills, 166 to 266m high, lie from about 0.8 mile to 1.5 miles inland.

6.17 Pambuhan Harbor (11° 14'N., 125° 32'E.) lies between the S end of Anahao Island and a partly drying reef about 0.5 mile SW on the W side of Matarinao Bay.

This reef extends about 0.3 mile SE from a small wooded island that lies close to the W shore of the bay.

There are depths of more than 11m within about 0.1 mile E of this reef and within less than 0.25 mile off its NE end.

An ore-loading pier, in ruins, extends more than 0.25 mile E across the N part of the above reef. There are depths of about

10 to 15m in the central part of the harbor, which lies between the pier head and the S end of Anahao Island.

Northward of the pier shoal water lies up to over 0.3 mile offshore, and most of the N part of the harbor is very shallow.

The entrance channel into Matarinao Bay trends WSW between the entrance reefs to Pambuhan Harbor and leads almost directly to the pier. The preferred channel passes between the S end of Anahao Island and the 7.3m patch that lies about 0.5 mile SE. The pier at Pambuhan Harbor and the higher islands on each side of the entrance are conspicuous from outside the bay.

Anchorage.—Large vessels can anchor off the pier in Pambuhan Harbor, in 11 to 12.8m, mud, about 0.5 mile SW of the S end of Anahao Island.

Smaller vessels can anchor farther N, in not less than 9.1m, mud, because the reefs are very steep-to.

These anchorages are untenable at times during the Northeast Monsoon, when sheltered anchorage may be found in the S part of Matarinao Bay.

6.18 General MacArthur (Pambuhan Sur) (11˚15'N., 125˚32'E.) (World Port Index No. 58650), the most important of several small towns on Matarinao Bay, is situated on the W side of Pambuhan Harbor W of the S end of Anahao Island.

The previously-mentioned pier of the Samar Mining Company is located just S of the town. There are several small landings at the town from which copra is taken by barge to vessels loading at the anchorage.

Between Matarinao Point and Sungi Point, about 25 miles SE, the coast consists of sandy beaches separated by coral cliffs, about 6m or more in height. The most prominent feature of this coast is the previously described partly-wooded coral ridge.

Asgad Point (11˚12'N., 125˚40'E.) is a bluff that lies about 5 miles ESE of Matarinao Point. The cliffs from close NW of Asgad Point to 1 mile SE of Pananamitan Point, a total distance of 3.25 miles, are vertical, mostly bare, and very prominent.

Bagtong Point (11˚05'N., 125˚44'E.), 5 miles SE of Pananamitan Point, is a 6 to 9m high bluff. It is not easily distinguished from seaward, but a steep bluff that rises abruptly to a height of 124m close behind the point is one of the most conspicuous parts of the previously-described ridge. The coast from Bagtog Point to abreast Luyong Point, 2 miles SE, is one vertical wall of coral with a few bushes.

Three islands, Calicoan, Leleboon, and Candolu lie on a reef extending about 8 miles SE from the above described peninsula. The bold wooded ridge on the peninsula, also extends down the chain of islands. The ridge is broken by several steep gaps, but the general impression is of one continuous ridge.

Calicoan Pass (11˚02'N., 125˚46'E.), the passage between the peninsula and the NW extremity of Calicoan Island, and the passages between the islands, are narrow, shallow, and dry in places.

Calicoan Island (11˚00'N., 125˚47'E.) has a ridge of hills extending down it from 75 to 105m high. The bluff facing Calicoan Pass is nearly vertical, but changes into moderate slopes further SE.

For a distance of about 3.5 miles SE of the N extremity of the island the coast consists of coral rock, 6.1m high.

There are several villages on the W coast of Calicoan Island.

Leleboon Island (10˚56'N., 125˚50'E.) is 61m high. Candolu Island, close S of Leleboon Island, is 57m high and wooded.

Sungi Point (10˚55'N., 125˚50'E.), the S extremity of Candolu Island, is 46m high, and has a reef extending 0.5 mile from its E side. Patches of reef lie within the same distance S and W of the point. Two shoals, with a depth of 4m, lie 1 mile SSE and 0.75 mile SSW of the same point.

A 4.9m shoal and a 5.5m shoal lie 0.9 mile SE and 0.75 mile S, respectively, of the same point.

A bank, with a depth of 12.8m, lies 2.75 miles SW of Sungi Point.

Leyte Gulf and Surigao Strait

6.19 Winds—Weather.—The climate in this area tends to be hot and humid. Except for the W side of Dinagat, the S end of Samar, and the N extremity of the E side of Leyte, which are somewhat protected from the NE, the coasts described herein are exposed to the Northeast Monsoon and the trade winds.

Although parts of these coasts are lee shores during the Southwest Monsoon, they are subject to the effects of the monsoon. There is considerable rainfall and practically no dry season. In general, there is no bad weather in this part of the Philippines unless a typhoon should occur.

The predominant winds are the Northeast Monsoon, which prevails from October to March or April, and the Southwest Monsoon, which prevails from June to September.

The Northeast Monsoon deposits a large amount of rain on these coasts and brings the coolest temperatures. Near the coast the Northeast Monsoon may be variable, particularly where the land is mountainous, and land and sea breezes may develop when the monsoon is weak.

Typhoons frequently develop during the season of the Northeast Monsoon. The Southwest Monsoon, which is not as strong as the Northeast Monsoon, is intermittent due to frequent storms.

During the Southwest Monsoon the winds near the coast are variable, and land and sea breezes may be better developed than during the Northeast Monsoon. Sometimes the land breeze may be very squally along mountainous parts of the coast.

The winds on various parts of the coast may not always conform with the prevailing monsoon. At Surigao the winds seem to conform with the monsoon and prevail from the NE from November through May, and from the SW from June through October.

At Tacloban, the winds prevail from the NW from October through March, from the SE in April and May, from the NW in June, and from the W from July through September.

At Guiuan, easterly winds are most frequent, and winds from N and NE occur about twice as often as those from S or SW. During the Northeast Monsoon E winds prevail more than 80 percent of the days. Even at the height of the Southwest Monsoon, SW winds at Guiuan are not as frequent as E winds during the Northeast Monsoon.

At the mouth of Surigao Strait, the Northeast Monsoon begins toward the end of September and continues through November. In December, NE winds alternate with N gales. In January winds blow from NE to ENE and are accompanied by heavy rain. In February and March easterly winds prevail. In April through June SW winds prevail with occasional southerly gales. During July through September SW winds are frequent.

Winds from the NE, though strong, cease during the night, but winds from SE through SW continue to blow. It usually rains with NNE and ENE winds. The rain ceases and the weather clears with E winds and more so with SE winds. It remains clear with SW winds unless a gale arises, which sometimes brings rain.

Typhoons do not occur as often in this area as they do farther N and about 7 percent of the more serious typhoons affecting the Philippine Islands are experienced in this part of the archipelago.

Although they may be encountered at any time of the year, the season when typhoons usually occur is from the end of July to the beginning of January. They begin to blow from the NW and finish from the SE, having passed through NE or SW. When they haul through NE they blow stronger and more rain falls.

During January, the typhoons which do not recurve move from E to W across the Philippine Islands in the latitude of about 10° N. In subsequent months the latitude of the mean track of the typhoons that cross the islands increases to about 18° N. in August, and hence it moves S again to the above minimum.

During the months of least typhoon activity, January through May, Surigao Strait and Leyte Gulf are either in or on the S edge of the mean track of the few typhoons that occur.

During the months of July, August, and September this area is almost completely free of typhoons, the mean tracks of which lie well to the N. In October, November, and December typhoons occur most frequently in this area, particularly during the latter two months.

Although the N end of Mindanao lies S of the main area of typhoon activity, Surigao has experienced several typhoons at rather long intervals.

Storm and typhoon warnings are broadcast and signals are displayed at various ports throughout the Philippine Islands.

The weather in the vicinity of Surigao Strait and Leyte Gulf is considerably influenced by the large amount of rainfall, most of which occurs during the Northeast Monsoon.

Storms during the Southwest Monsoon sometimes pass across the islands and bring considerable rain to these coasts.

There is no dry season. Much of the rain from April to September is with thunderstorms, which occur most often in the afternoon or at night. The maximum amount of rainfall is about 3,559mm at Surigao, about 2,542mm at Tacloban, and about 3,432mm at Guiuan.

More than 50 percent of the annual rainfall occurs during the winter months. At Surigao, about 2,619mm falls between November and March, but only about 80mm between May and September.

Fog is rare, but it may sometimes develop on the coast during the latter part of the night when there is little or no wind. Such fog quickly disperses after sunrise. Early morning mist is not uncommon over the land during fine weather.

Visibility is generally good. It may be reduced to less than 0.5 mile during heavy rain, but this usually lasts only for a few minutes at a time. Moderate visibility may be experienced because of haze or mist that occurs during the Northeast Monsoon or along coasts exposed to the Southwest Monsoon when the latter prevails.

Tides—Currents.—The North Equatorial Current divides E of the Philippine Islands, and the S branch tends to set S across the E entrance of Surigao Strait and along the E side of Mindanao. Because of the seasonal shifting N and S of the North Equatorial Current and the fact that the dividing position lies E of Samar, the currents E of Sungi Point and the E entrance of Surigao Strait may set contrary to the above. Comparatively few observations have been made in this vicinity, but the following may be experienced.

During January and February in the above vicinity, the current tends to set SSW at a velocity of about 1 knot, however in January a WNW set of about 1.3 knots has been experienced off the entrance of Surigao Strait.

In March, April, and May the current sets SW and SSW at a velocity of less than 0.5 knot to almost 1 knot.

From June through August the current sets WSW and SW at a velocity of about 0.5 to 1 knot, but E of Sungi Point a current setting NW at about 1 knot was experienced in July. In September, the current tends to set between SW and SSE at a velocity of less than about 0.5 knot.

In October, November, and December the current at the E entrance of Surigao Strait tends to set between WSW and SW at a velocity of about 0.5 knot. In the S part of Leyte Gulf and the central part of Surigao Strait during these latter three months, the current sets SW, SSW, and S, respectively, at a velocity of about 1 knot.

The Pacific side enters the Mindanao Sea from E through Surigao Strait. The tidal current sets W into the E entrance of Surigao Strait and Leyte Gulf on the rising tide and E on the falling tide. It attains a velocity of about 6 knots between the N end of Dinagat Island and Homonhon Island. In that part of Surigao Strait that lies between Dinagat Island and Leyte, the flood current sets S, and the ebb sets N.

In the S entrance of the strait the flood current sets SSW into the Mindanao Sea, and the ebb sets in the opposite direction. Between Hibuson Island and the N end of Dinagat Island the flood current sets SSW, and the ebb sets NNE.

In the W end of Hinatuan Passage between Bilaa Point and the islands at the S end of Dinagat Island, the flood current sets NW into Surigao Strait, and the ebb sets SE.

Tidal currents of a local nature are described in the parts of this sector where their related coastal features appear.

Caution.—A large area of sand waves exists NE of Desolation Point, extending from the meridian of 125° 45'E to about the 200m curve.

Samar—Sungi Point to San Pedro Bay

6.20 Guiuan (11° 02'N., 125° 43'E.) (World Port Index No. 58655) harbor occupies an area of deep water within the reefs between Manicani Island and the coast ENE. The town of

Guiuan is situated on the coast about 4.5 miles ENE of Manicani Island.

Depths—Limitations.—The harbor at Guiuan consists of a roadstead that lies within and is somewhat confined by many dangerous steep-to reefs. It is sheltered except that the reefs southward protect it only from the sea and leave it exposed to winds from between SSE through SW.

The main entrance channel, about 0.5 mile wide and 11 to 29m deep between the steep-to reefs and shoals on either side, trends about 5.5 miles NE from a position about 1 mile S of Manicani Island to the middle of the harbor anchorage area, about 1.3 miles SW of Guiuan.

A beacon is located about 1 mile SE of Inatoulan Island and marks the NW edge of a drying reef. This beacon, in range 048° with the church at Guiuan, leads through the entrance channel to the harbor anchorage.

A buoy marks a 7.8m patch that lies on the S side of the entrance of the channel in a position about 1.5 miles SE of the S end of Manicani Island. A reef, marked by pile beacons, lies awash on the S side of the channel about 1 mile SE of the SE extremity of Manicani Island.

Most of the other steep-to dangers on each side of the entrance channel are marked by pile beacons, but there are a few 6 to 9m patches close off them.

Vessels are advised to adhere to the entrance range, except at a position about 1 mile S of Inatoulan Island, where it leads over a depth of 7.8m. This patch can be avoided by keeping slightly S of the entrance range line in that vicinity.

A beacon marks the SE edge of a drying reef. The beacon is located about 2 miles WSW of the head of the pier at Guiuan. A lighted buoy is moored on a 12.8 patch about 0.5 mile S of the beacon.

The channel to **Buenavista** (11°00'N., 125°39'E.), located on the N side of Manicani Island, is entered through the outer part of the entrance channel to Guiuan.

From a position about 1.5 miles SE of the NE end of Manicani Island and well clear of a number of detached 4 to 6m patches that lie up to about 0.8 mile E of that island, the channel trends NNE.

At a position about 0.8 mile E of the wharf at the NE end of Manicani Island, a channel, with a least charted depth of 10.5m, trends W to the wharf. Several shoal patches and reefs lie close N of the latter channel.

A channel, with charted depths of about 8 to 20m, leads about 5.3 miles in an ESE direction from close N of Bar Islet on the S side of the harbor anchorage, to a confined anchorage off the town of **Soroc** (10°59'N., 125°48'E.).

A beacon is situated on the N side of a detached reef in a position about 2 miles SSW of the head of the pier at Guiuan.

A SE entrance channel to Guiuan trends about 8.5 miles NW from a position about 1.5 miles W of Sungi Point to the harbor anchorage off the town. Although it has charted depths of about 6 to 13m between the reefs on either side, this channel is unmarked and requires local knowledge.

Aspect.—Manicani Island is a prominent landmark on the N side of the entrance to the channel to Guiuan.

Tubabao Island, 30m high and on which there is a conspicuous water tower, lies close offshore NW of Guiuan.

Inatoulan Island, a low wooded islet, lies on the N side of the harbor, less than 0.3 mile S of Tubabao Island.

A church spire is conspicuous at the town of Guiuan, and the buildings, there and at the other small towns in the vicinity, are easily seen.

A light is shown from Guiuan church. A concrete causeway extends SW over the reef fringing the shore in front of Guiuan.

Pilotage.—Although pilotage is not compulsory, vessels lacking local knowledge should not attempt to enter without a pilot. Pilots for Guiuan are available at Tacloban. Vessels entering and navigating in the harbor should exercise extreme caution to avoid the numerous unmarked dangers.

Anchorage.—Anchorage can be taken in the harbor, in depth of 20.1m, about 0.8 mile SE of Inatoulan Island with the church at Guiuan bearing 048°, and the SW side of Inatoulan Island bearing 308°.

The harbor anchorage area is about 1.3 miles long and about 0.5 mile wide between the partly drying reefs that almost surround it. Except for the following shoal patches and those that lie close off the reefs, there are depths of about 12 to 20m in this harbor area.

A detached 7.8m patch, with a 6.4m patch about 0.3 mile NE of it, lies in the central part of this anchorage in a position SE of the entrance channel range line and about 1 mile SSE of Inatoulan Island. Several channels, for small vessels of limited draft, lead from this anchorage to the causeway at Guiuan and to a pier N of the town.

Caution.—In addition to the buoys and beacons described previously, there are a number of buoys marking parts of the above channels. Caution must be exercised as many of the buoys have been reported missing or out of position. Storm warnings are displayed at Guiuan but they are not visible from the harbor.

6.21 Manicani Island (11°00'N., 125°38'E.) is a conspicuous island that lies on the SW edge of the reefs and dangers fronting this section of the coast in a position about 4.3 miles offshore SW of the town of Guiuan.

There are several radio towers in the central part of the island, and the town of Buenavista is situated on the NE end. A large wharf at this latter place and the channel to it are described with the approach to Guiuan.

A detached 7.3m patch lies about 1 mile offshore in a position about 1.8 miles W of the S end of Manicani Island. A steep-to, partly drying reef, with numerous above and below-water coral patches close off it, extends about 5.3 miles NW from Manicani Island. Baul Islet lies on the NW end of this reef. The wreck of a barge, loaded with ammunition, lies sunk in 18.3m in a position about 3 miles ENE of **Balinatio Islet** (11°06'N., 125°35'E.).

A deep channel lies between the islets and dangers on the E side of this latter reef and those NE. It is encumbered with many coral heads, some of which are marked by piles. Most of the buoys marking the channel have been reported missing. The S entrance, which is entered from the channel to Guiuan, lies between shoals that fringe the E side of Manicani Island up to about 0.8 mile and a partly drying reef, about 1.8 miles ENE of that island.

Except for a 4.6m depth, about 1.3 miles ENE of Manicani Island, the S entrance of the above channel has depths of 13m or more. A drying rock lies about 0.8 mile NNE of the NE extremity of Manicani Island.

The best track through the channel trends NW and passes NE of the above rock and **Cambasingan Islet** (11˚02'N., 125˚39'E.) and Cabalarian Islet, which lie about 1.5 miles N and 2.75 miles NNW of the NE end of Manicani Island.

It passes W of Caninoan Islet, which lies about 0.8 mile N of Cambasingan Islet. Vessels are advised not to enter the above channel without local knowledge.

A floating dock is situated 2 miles N of Manicani Island, about midway between Cambasingan and Cabalarian Islets.

Walker Shoal (11˚01'N., 125˚32'E.), with a depth of 0.6m, is a detached steep-to coral depth. It is the southwesternmost of the dangers off this part of the coast and can be distinguished by the light-green color of the water over the shoal.

Balinatio Islet (11˚06'N., 125˚35'E.), low and wooded, lies so close S of Cabarasan Point that it appears as part of the point.

6.22 **Quinapundan Bay** (11˚07'N., 125˚33'E.), which is encumbered with extensive steep-to reefs and a number of islets, lies between Cabarasan Point and Gigoso Point, low and wooded, about 4 miles WSW.

Among the numerous islets and reefs, good protected anchorages may be obtained with local knowledge.

A channel leads close around Gigoso Point into a confined area of deep water in the SW part of the bay. Another deep channel leads along the E shore to a small basin at the NE end of the bay.

Between Gigoso Point and Capines Point, about 16.5 miles W, the coast is indented by a number of unimportant small bays and bights, on the shores of which there are a few villages. The low coast is closely backed by hills that attain a height of 305m about 1.5 miles inland. In several places steep-to reefs lie up to as much as 2.3 miles offshore.

Cablagna Point (Cablagua Point) (11˚05'N., 125˚24'E.) is low and wooded. A coral reef, nearly awash, lies 0.75 mile S of Cablagna Point. A 1.8m shoal lies 0.75 mile W of the same point.

Lucson Point (11˚06'N., 125˚22'E.), 122m high and prominent, lies about 2 miles WNW Cablagna Point.

Lauaan Point (11˚07'N., 125˚19'E.), a low point, lies 3.5 miles further WNW.

Lauaan Bay (11˚07'N., 125˚17'E.) indents the coast between Lauaan Point and Capines Point, about 5.5 miles WSW. The shore at the NW end of the bay is steep-to and there are several beacons in this latter vicinity.

Capines Point is the S extremity of a prominent headland that rises abruptly to a height of 122m less than 0.25 mile inland and to a summit about 1.8 miles N. It is steep-to.

A detached 9.1 to 11.4m depth lies about 0.7 mile E of Capines Point.

San Pedro Bay

6.23 **San Pedro Bay** (11˚10'N., 125˚05'E.) occupies a bight formed by the N end of the E coast of Leyte and the SW end of Samar.

The E side of the bay, which is closely backed by hills and mountains, trends about 12.5 miles NNW from Capines Point and is sparsely populated.

The low W side of the bay trends about 10.5 miles S from **Cataisan Point** (11˚14'N., 125˚02'E.), close SE of Tacloban, to Vigia Point.

Although a large part of the bay has depths of 9.1 to 33m, much of the N end is shallow. There are a large number of reefs, shoals, and islets throughout the bay.

The recommended channel leads safely through these dangers to the entrance of the channel to Tacloban, or to several large clear areas of deep water.

A large number of steep-to shoal patches lie across the entrance of San Pedro Bay and its approach. These dangers comprise several groups, between which there are deep clear channels, and vessels should have no difficulty if they adhere to the recommended channel.

Caution.—Dynamiting for fish is common in San Pedro Bay, and there may be numerous fishing nets or traps in the N part of the bay. Less water than charted and numerous uncharted obstructions exist in San Pedro Bay.

6.24 **Mariquitdaquit Island** (11˚05'N., 125˚09'E.), marked by a light, lies in the entrance of San Pedro Bay. The islet consists of a flat rock, partly awash, on which there are several rocky lumps, about 5.5m high.

Punubulu Islet (11˚13'N., 125˚06'E.), low and wooded, lies in the middle of the N part of San Pedro Bay.

Dio Islet (11˚13'N., 125˚03'E.), low and wooded, lies about 1 mile offshore. A dangerous sunken wreck lies about 0.3 mile W of the islet. A dangerous wreck was reported to lie about 1.3 miles E of Dio Islet. The above-water wreck charted on the NW side of Dio Islet was reported missing.

The dredged part of the outer channel, from Dio Islet to **Jinamoc Island** (11˚16'N., 125˚05'E.), is reported to have shoaled to depths of 5.5m, but the projected depth is 7.6m. There are charted depths of 8 to 13m in the inner part of the channel from the latter island to Tacloban.

The towns on the low W and N shores of the bay are conspicuous. Some hills and mountains back the low coastal plain on the W shore of the bay about 1 to 2 miles inland between Palo and Tacloban.

Mount Guinhandang lies close N of Palo, and Mount Naganaga lies about 2 miles SW of Tacloban and is the highest of these mountains. Mount Danglay is a conspicuous summit that lies at the NW end of the bay about 1 mile N of the entrance point of San Juanico Strait.

A number of small rivers, navigable only by small craft, empty into the bay in the vicinity of some of the towns.

Tacloban (11˚15'N., 125˚00'E.)

World Port Index No. 58690

6.25 Tacloban, the chief port of Leyte, lies in the SE entrance of San Juanico Strait at the NW end of San Pedro Bay. It is a first port of entry. Although the harbor area includes all of the entrance of San Juanico Strait, the main part of the harbor occupies a small bight that recedes about 1 mile S between Panirugan Point and Anibong Point, about 1 mile WNW. There is a wooden pier partly in ruins on the E side of Anibong Point.

Winds—Weather.—There is practically no dry season at Tacloban. Rain is frequent, and the maximum rainfall occurs during December, January, and February.

During July, August, and September severe typhoons may occur, and the prevailing winds are then reported from the SW.

Tides—Currents.—The tides at Tacloban are chiefly diurnal. The mean tidal range is 0.4m and the maximum range is 1.1m. The mean height of higher HW is about 0.6m, and that of higher LW is about 0.1m. The tides show their greatest inequality during HW.

In the entrance of San Juanico Strait off Tacloban, the flood current sets NW and the ebb SE, and they may attain a maximum velocity of about 3 knots.

Depths—Limitations.—The controlling depth for vessels entering the port of Tacloban, by way of San Pedro Bay, is 5.79m, liable to silting. The entire bay is encumbered with islets, reefs, shoals, and fish traps. Use caution in entering and proceeding to the pilot station.

The maximum length of vessel that can be accommodated is 154m, with a maximum draft of 6m.

The City Wharf is a concrete structure divided into four sections. The N end is 114m long, the W end is 411m long, the S end is 102m long, and the fourth section connects to the shore and has lengths of 58m.

Depths alongside the pier range from 2 to 9m, but are subject to silting.

Expansion and modernization is planned to meet foreign and domestic traffic needs. The project calls for improvement to the existing wharf, construction of new berths and upgrading the entrance channel.

There is also a T-shaped pier for smaller vessels E of the main wharf. The T-head is 20m long and about 30m wide. The depth at the N face is 3.4m. It is not safe for large vessels.

Anibang Point Pier, 1.25 miles WNW of Panirugan Point, extends 52m from shore. It has a 12m long T-head, with a depth of 7.3m alongside the head. Fuel is discharged onto this pier through pipelines.

Aspect.—A white statue, 7m high and standing on the 74m hill behind the town, is prominent.

A 61m high radio tower, located 1 mile NW of the city, is also prominent.

Pilotage.—Pilotage is compulsory for vessels over 100 grt bound for Tacloban, for passing through San Juanico Strait, for anchoring in the Quarantine area in the harbor stream, and for shifting or changing berths within the harbor. No lookout is kept in the SE approach.

Vessels requiring a pilot must make a request to Tacloban Harbor Pilot Association at least 24 hours prior to arrival, indicating the type of pilotage desired.

The pilot will board a vessel in the vicinity of Egbert Shoals or, on special request and for an additional fee, off Mariquitdaquit Islet.

The pilot station at the NW entrance of San Juanico Strait is located at **Canauay Island** (11°26'N., 124°51'E.) and maintains a continuous lookout for vessels requiring a pilot. There is a pilot's office located just off the pier.

The Tacloban Pilot boat is a motor launch with the word "Pilot" painted on both sidesand it flies the "H" flag.

In case of inclement weather vessels are advised to anchor 3 miles S of Dio Island when waiting for a pilot.

Signals.—Storm warnings are shown at Tacloban from an observatory on Panirugan Point.

Anchorage.—The quarantine anchorage for the port of Tacloban is about 0.5 mile N of Panirugan Point.

All vessels subject to quarantine inspection shall drop anchor within the limits of this anchorage and await quarantine inspection.

Any vessel subject to quarantine inspection, anchoring in an area in the Port of Tacloban outside the quarantine anchorage, may not be cleared from quarantine until such vessel proceeds within the limits of the anchorage.

A vessel subject to quarantine measures may not be allowed to leave the quarantine anchorage until given free pratique by the quarantine officer.

Vessels carrying explosives, inflammable liquids, or other dangerous cargo must obtain special permission from the harbormaster to go alongside the wharf.

The bottom at the anchorage is clear sand and a little mud.

Anchorage can be taken, in about 7.8m about 0.3 mile N or NW of Panirugan Point or, in about 4 to 5m, about 0.3 mile NW of the wharf. A mooring buoy is located about 0.5 mile NW of the N end of the wharf.

Vessels of too deep a draft to enter the harbor can anchor S of Dio Islet, in 9 to 11m, mud. Vessels awaiting pilots can anchor in the latter anchorage or N of Egbert Shoals in about 13 to 15m, mud.

Anchorage can be taken about 1.5 miles N of Mariquitdaquit Light, in a depth of 33m.

Directions.—When approaching from S or E, pass 1.25 miles SSW of **Capines Point** (11°05'N.,125°14'E.)and follow the charted track. When 1 mile E of Dio Islet, bring Basey Church spire to bear 004°,and steer for it on that course. Care should be taken to avoid a charted dangerous wreck and a 4.9m shoal lying 1.25 miles E and NE; respectively, of Dio Island.

When 0.25 mile SSE of Buoy No. 1, alter course to 328° until 0.25 mile NNW of the same buoy. Then course should be altered to 291° to pass N of Buoy No. 3, taking care to avoid the 5.5m shoal close NW of the buoy. When about 0.3 mile NW of Buoy No. 3, Janamoc Light should be brought astern, on a bearing 089° and a course 269° steered to pass between Buoy No. 2 and Buoy No. 5. Then proceed as requisite to anchor or berth alongside, taking care to avoid the 2.7m shoal, 0.2 mile N of the wharf.

6.26 Tanauan (11°07'N., 125°01'E.) can be identified by its long pier and by the large tank, warehouses, and sheds near its root.

The pier, a wooden T-head, extends 332m from the S shore of Tanauan. The T-head, 27m long, is oriented in a 105°-195° direction. A line of five dolphins exists along the T-head and off either end of the head.

Depths of 8.2 to 9.1m were found alongside. The pier is unlighted and of wooden construction. There was a strong surge between the ship and the pier.

The maximum size of vessel accepted is 305m, with a beam of 27m and a draft of 9.4m. Berthing is in daylight hours only and tugs are not available.

Copra meal and copra oil are loaded from the pier, the oil being loaded through an eight inch pipe with a rate of about 150 tons per hour.

Pilotage.—Pilotage is compulsory and a 12 and 24 hour notice is required. Pilot boards 1 mile N of Mariquitadaquit Island.

Vessels can enter at any state of the tide; however, it is recommended to enter or leave during daylight hours due to the unsafe conditions at night.

Caution.—Numerous fish traps are located in the approach to the pier at Tanauan.

Leyte—Vigia Point to Taytay Point

6.27 **Vigia Point** (11° 04'N., 125° 02'E.) is backed by Tolosa Mount, a rocky headland that appears as a pyramid from the S. There is an old fort on the summit of the point. The small town of Tolosa lies on the S side of the point. A light is shown from a concrete tower on the fort.

A water tank situated 2.25 miles NW of Vigia Point.

Liberanan Head (11° 00'N., 125° 02'E.), a conspicuous hill 122m high lying about 4.5 miles S of Vigia Point, is the SE end of a ridge of hills that attains a height of 427m in Catmon Hill, about 2 miles NW of the head. Although there is no extension seaward of the land in this vicinity, the hills rise so abruptly from the flat country southward that they appear as a headland from the offing.

A detached 2.3m depth lies about 0.5 mile offshore about 2.3 miles NNE of Liberanan Head, and is the farthest W of the dangers in the entrance of San Pedro Bay.

Dulag (10° 58'N., 125° 02'E.) is a town situated on the coast, about 2.5 miles S of Liberanan Head. A large stone church at the town and a chapel in the cemetery N of the town are the most conspicuous of a number of buildings with metal roofs. Considerable amounts of hemp and copra are shipped from here. There is a post office at Dulag.

Abuyog (10° 45'N., 125° 01'E.), a town situated on the coast, is easily identified from seaward. A large stone church and a municipal building, both of which have metal roofs, are conspicuous. A conspicuous water tank is situated in the S part of the town. There is a telegraph office, and the town is connected with Tacloban by road.

Abuyog Light is shown from a concrete tower, 8m high.

6.28 **Tangbo Point** (10° 44'N., 125° 02'E.) is a rocky point that rises abruptly to a 190m summit. Between Tangbo Point and Taytay Point, about 5 miles ESE, the rocky intervening coast rises abruptly to summits of as much as 530m high, less than 1.5 miles southward.

Taytay Point (10° 42'N., 125° 07'E.) is a sharp rocky headland with a conspicuous hill, 30m high. The land rises abruptly to heights of more than 305m about 1 mile SW of the point. A narrow ledge, about 1m high, extends about 0.1 mile ENE from the point, and a rock, 4.5m high, lies about 91m N of the outer end of this ledge.

A dangerous wreck, part of which shows above water, lies about 1 mile offshore, 8.5 miles NW of Taytay Point.

Homonhon Island (10° 44'N., 125° 42'E.), a heavily wooded and mountainous island, lies on the E side of Leyte Gulf about 10 miles SW of Sungi Point and because of lower land between its extremities, the island appears as two islands from a considerable distance S.

Cagosoan Point (10° 43'N., 125° 49'E.) is the E extremity of the island.

A depth of 18.3m is located 6.5 miles S of the S shore of Homonhon Island. A deep channel lies between this shoal depth and Dinagat Island. It has been reported that depths up to 20m less than originally charted lie in this deep channel.

Depths of 34.7, 36.6, and 38.4m were reported 10 miles S, 9.5 miles S, and 11 miles SSW, respectively, of Cagosoan Point.

The village of Homonhon is situated at the head of Casogoran Bay, which occupies a large bight on the NE side of Homonhon Island.

Anchorage.—Anchorage can be taken during fair weather, in 42m, coral and sand, about 1 mile E of the village and about 0.3 mile offshore; easterly swells roll in heavily, but it is partly protected from SE swells.

Landing can be made through breaks in the reef in front of the town and about 1.3 miles NW. In the latter and better opening there is a rock, with a depth of 0.3m and marked by a post, that should be left to N in entering.

The best anchorage at Homonhon Island is E of the S end of **Montoconan Islet** (10° 47'N., 125° 39'E.), in 11 to 20m, sand, in the middle of a small bight open to the S. It affords shelter from all winds except those from S to SW.

The clearest approach to this latter anchorage is found by following the W shore of Homonhon Island at a distance of about 0.3 mile.

Several narrow banks, with depths of 12 to 18m, lie parallel to each other about halfway between Homonhon Island and Suluan Island, about 7.75 miles E. When the sun is high and the sea smooth, these banks can be distinguished by the lighter color of the water and by rips that sometimes occur over them.

The banks are extending S, and a depth of 22m has been found E of the S limits in a position 4 miles SSW of the S extremity of Suluan Island.

Suluan Island (10° 46'N., 125° 57'E.) is high and hilly. and a light is shown from an aluminum tower, 16m high, standing on the summit of the island. The village of Granadas in situated on the SW side of Suluan Island at the head of a small bight between two reefs.

Anchorage, sheltered from NW through SE winds, can be taken in this bight, in 11 to 13m, sand, 0.5 mile W of Granadas.

Caution.—Sandwaves are present in an area, best seen on the chart, centered about 17 miles SE of Homonhon Island. Depths are subject to change and may be less than charted.

Surigao Strait—West Side

6.29 The W side of Surigao Strait trends SSE from Taytay point to Binit Point and appears high and rugged.

This entire steep-to coast is closely backed about 1 to 2 miles inland by a coastal range of mountains, 427 to 945m high. There are a number of high prominent points, but much of the intervening coast particularly in the bights, is low.

Tide—Currents.—The currents tend to set parallel to this part of the coast and along the coast adjacent to the S part of Surigao Strait the currents tend to be similar to those in the strait.

At the entrance of Panaon Strait the flood sets W and the ebb E, and they attain a velocity of 3 to 4 knots at springs in that

strait. Strong eddies and whirlpools occur at the entrance of Panoan Strait.

Between Amagusan Point and Pandan Point the flood current sets N and the ebb S, which is contrary to the general set of the currents in Surigao Strait. There are rips off this section of the coast as well as off the Cabugan Islands and some of the more prominent points.

There is apparently little or no current in the bays and bights.

Between Taytay Point and Hingatungan Point, about 8.5 miles SE, the coast trends quite regularly and is fringed up to about 0.3 mile offshore by reef and shore bank, which are steep-to. A rock islet, 17.3m high, lies on the edge of the shore bank in a position about 0.8 mile S of Taytay Point.

Hingatungan Point (10°35'N., 125°11'E.) appears as a long, low, and heavily wooded projection when seen from N or S. It is fringed by a narrow reef, and a number of above and below-water rocks lie up to about 0.1 mile off the S side of the point. These rocks are dark and do not show up well when the sea is smooth. There are tide rips 1 mile ENE of the point.

A detached 10.5m depth lies about 0.5 mile SSE of Hingatungan point.

Hingatungan is a village situated about 0.5 mile NW of Hingatungan Point at the head of a small break in the coastal reef.

Small vessels, up to about 24m long, can anchor here and be sheltered in any weather.

Pelada Rock (10°34'N., 125°11'E.), 10m high, is a steep-to danger that lies on the edge of the 20m curve about 0.3 mile SE of a point, about 1 mile S of Hingatungan Point. The channel between the rock and the reef fringing the coast is about 0.3 mile wide and requires local knowledge. Foul ground and rocks, which sometimes break, extend about 0.3 mile E from the point off which Pelada Rock lies.

6.30 Lagome (10°33'N., 125°11'E.) (World Port Index No. 58700), the site of a sawmill, lies at the head of a small cove. There is a small wharf with reported depths of 3.3m alongside. A boat from Cebu and Tacloban calls here weekly. The cove provides fair shelter for small craft during heavy NE weather.

Small vessels can either go alongside the wharf or take anchorage in the entrance of the cove, in 9.1m, about midway between the reefs fringing the entrance points, with Pelada Rock bearing 080°.

The village of Silago lies about 2.3 miles SW of Pelada Rock. A cluster of black rocks lies just inside the 20m curve about 0.5 mile offshore and about 1 mile NE of Silago. One of these rocks is about 1.8m high, but most of the others are awash. They are surrounded by shoal water, and the channel between them and the shore is shallow and should not be used.

Sogod Point (10°28'N., 125°11'E.), low and wooded, lies 3.75 miles SSE of Silago.

Saingan Point (10°27'N., 125°11'E.), 2 miles S of Sogod Point, is composed of dark rocks and is low and steep-to.

Hinunangan Bay (10°25'N., 125°13'E.) recedes SW between Saingan Point and Pandan Point, about 4 miles further SE. Hinunangan is a small town situated on the SW side of Hinunangan Bay about 2 miles W of Pandan Point. Copra is shipped from here. There is a post and telegraph office at the town.

Anchorage.—Anchorage can be taken close off the town, in about 13 to 22m, sand, or in lesser depths depending on draft. During the Northeast Monsoon, when it is too rough off the town, anchorage can be taken off the village of Kanipaan, about 1.3 miles NNW of Hinunangan.

Coastal vessels usually discharge their cargoes at the latter anchorage when strong NE winds make it impossible to do so at Hinunangan. Sheltered anchorage can also be taken in the lee of the Cabugan Islands, but the depths are greater.

Cabugan Islands (10°27'N., 125°14'E.), two small populated islands, lie between about 2 and 5 miles N of Pandan Point. Cabugan Chico Island is the S and smaller.

Cabugan Grande Island lies about 0.8 mile NNE of the S island. Rips occur in the deep narrow channel between the islands.

6.31 Pandan Point (10°24'N., 125°14'E.), composed of coral rock, 4 to 5m high, rises abruptly to a 244m wooded summit. This very conspicuous point is at the NE end of short ridge of hills that attains a height of 305m about 1 mile SW of the point.

Between Pandan Point and Amagusan Point, about 8.5 miles S, the coast is low and wooded, and the mountain range paralleling it lies several miles inland. Several detached hills rise abruptly from the coast in the vicinity of Pandan Point.

Bugho Point (10°22'N., 125°15'E.), the N entrance point of Hinundayan Cove, is low and fringed by a narrow steep-to reef. The wooded land rises steeply to a 116m summit about 1 mile WNW. There are tide rips off the point.

Hinundayan (10°21'N., 125°15'E.), a regular port of call for coastal vessels, is a small town situated at the head of Hinundayan Cove. The cove, the only indentation on this section of coast, recedes about 0.5 mile W and is less than 0.75 mile wide. Except for a small detached reef, with a depth of 6.9m, that lies in its S part between 0.25 and 0.5 mile offshore, the cove is clear of dangers and has depths of about 7 to 24m. There is a small pier for boats at the town.

Anchorage can be taken about 0.2 mile offshore in the cove, in 12.8m with the extremity of Bugho Point bearing 026° and the church at the town bearing 243°. Being open to the E, the cove is exposed to the Northeast Monsoon.

Amagusan Point (10°16'N., 125°15'E.), lying about 6.5 miles S of Bugho Point, is the N entrance point of Cabalian Bay. The point is low and covered with mangroves. There are tide rips about 2.5 miles NNE of the point.

Mount Cabalian (10°17'N., 125°13'E.) 945m high and the most conspicuous mountain in the vicinity of Surigao Strait, lies about 2.5 miles NW of Amagusan Point. The mountain is conical, with the upper part broken off, and it has three peaks, the middle one being the highest.

Between Amagusan Point and Caligangan Point, about 8 miles SSW, a bight recedes about 6.5 miles WNW.

Although the shores of the bight are low in many places, the coastal ranges attain heights of about 335 to 945m about 0.5 mile to 2 miles inland. The low and in the immediate vicinity of Panaon Strait forms a break in these ranges.

6.32 Cabalian Bay (10°15'N., 125°10'E.), on the N side of which is situated the small port of San Jose, occupies a part of

the above-described bight between Amagusan Point and Mangayao Point, about 8 miles SW.

The N side of Cabalian Bay trends about 7 miles W from Amagusan Point to the head of the bay and has a steep rocky beach. There are coconut groves and a number of villages on this shore.

The W side of the bay trends very regularly about 6.3 miles S from the head of the bay to Mangayao Point and consists of steep rocky bluffs interspersed by small sand beaches.

Two prominent rocky islets lie on the edge of a reef that closely fringes the shore in front of the village of Loctob (Molopolo), situated about 0.8 mile N of Mangayao Point.

Marangay Point, about 1.8 miles N of Mangayao Point, is a conspicuous wooded bluff, 61m high, that descends steeply to the rocks at its foot. A rock, 6.1m high, lies on the edge of a narrow shore bank about 1 mile N of Marangay Point.

San Jose (Cabalian) (10° 16'N., 125° 10'E.), the principal town in the vicinity, is situated on the N side of Cabalian Bay. A white church, with a yellow-roofed building on one side and a red-roofed building on the other, is conspicuous at the town.

A concrete tower, 10m high from which it is intended to show a light, stands near the shore. The shore is very steep-to, with depths of 18 to 64m, close off the town.

There is a small stone landing in ruins and not usable.

There is a copra warehouse with a capacity of 800 tons, and small quantities of that product and hemp are shipped.

Local labor is available and lighters can be obtained from Tacloban. Fresh water and stores are not available.

There is a post office and a radio station at San Jose, and telegraphic communication is maintained with Hinuangan and Anahawan.

Vessels can anchor in good holding ground just off the landing at San Jose. Although it is well protected from the Northeast Monsoon, this anchorage is untenable during the Southwest Monsoon.

Mangayao Point (10° 11'N., 125° 08'E.), about 15.2m high and precipitous, is a small rocky promontory. A detached, steep-to 6.4m patch lies about 0.5 mile E of the point, and there is deep water between them.

Calingangan Point (10° 08'N., 125° 13'E.), about 5 miles SE of Mangayao Point, rises to an elevation of 241m about 0.6 mile further S.

Between Caligangan Point and Bolobolo Point, about 13 miles SSE, the coast on the NE side of Panaon Island is clear of dangers and very steep-to. A coastal mountain range rises abruptly from the sea to 352 to 871m summits about 1.5 miles inland.

Binit Point (9° 55'N., 125° 17'E.), the SE extremity of Panaon Island, rises abruptly to the summit of Mount Nelangcapan, about 1.5 miles NW. Binit Point, which is very steep-to, has depths of more than 18.3m less than 0.25 mile offshore.

Several small villages are situated near the point. Bolobolo Point, which lies on the E extremity of the SE end of Panaon Island in a position about 1.3 miles NE of Benit Point, rises to 256m summit close inland and is similarly steep-to.

Surigao Strait—East Side

6.33 Dinagat Island (10° 07'N., 125° 35'E.), including the islands contiguous with its S end, forms the E side of Surigao Strait and extends about 40 miles N from Rasa Island, about 9 miles ESE of Bilaa Point.

A mountain range, about 183 to 457m high, backs the W side of Dinagat Island less than 2 miles inland, and another range, up to about 914m high, closely backs the E side of the island. The W side of Dinagat Island is indented by many bights and bays that are separated by prominent points.

Numerous small streams empty into the sea along the coast. Except for small coastal villages, the island is sparsely inhabited. Hemp, copra, and some minerals are exported.

The N end of Mindanao, the W side of Dinagat Island, and the islands adjacent thereto are mostly steep-to and have depths of more than 18.3m about 0.8 mile offshore. There are a number of steep-to detached rocks, shoals, and other dangers that lie at some distance offshore.

Except as indicated, the dangers on these coasts are so steep-to and the depths in their vicinity so great and irregular that the fathom curves are of little help in approaching them.

Bilaa Point (9° 49'N., 125° 26'E.) is the termination of the range of mountains which traverses the E coast of Mindanao. It is composed of dark rock and is fringed by a narrow, steep-to reef. Discolored water has been reported to extend 0.5 mile offshore on the NE side of the point.

Bilaa Shoal (9° 50'N., 125° 26'E.), composed of sand and dark coral heads, has a least depth of 3.6m and lies 0.75 mile N of Bilaa Point, from which it is separated by a deep channel about 0.5 mile wide. Vessels using this channel should keep about 0.3 to 0.5 mile from the point. The shoal is usually marked by rips. During the Southwest Monsoon, anchorage can be taken on the slope of the shoal out of the strength of the tidal current.

Between Bilaa Point and Sugbu Islet, about 13 miles ESE, the coast trends irregularly along the N end of Mindanao and the numerous islets contiguous thereto.

Except for Bilaa Point, this coast is low and wooded. Its E half is fronted by numerous low mangrove islands, which lie so close to shore and to each other that they appear to be part of Mindanao.

The narrow passage between these islands are navigable only by boats with local knowledge. The hills close to the coast are detached from a coastal mountain range, the summits of which attain heights of between about 305 to 396m less than 2.25 miles inland.

Although it is fringed by reefs and shoal water, this coast is fairly steep-to and has depths of more than 18.3m about 0.5 mile offshore. A number of small rivers discharge along this coast.

Between Bilaa Point and Surigao, about 4 miles SE, the coast is low and wooded. It is closely backed by mountains that attain a height of more than 366m about 2 miles inland. The first two miles of this coast is stony, with a few sand beaches, and is fringed by jagged coral heads that lie up to about 91m offshore. Close outside these dangers depths increase abruptly to more than 18.3m.

The remainder of this section of coast is a narrow, sandy beach fronted by a shore bank that drops off abruptly to depths of more than 18.3m about 0.3 mile offshore. Several small rivers, navigable only by boats, empty from this coast.

Basol Island (9° 50'N., 125° 29'E.) is an islet that lies about 2 miles offshore, about 2.8 miles ENE of Bilaa Point. It is

located in the middle of the W end of Hinatuan Passage and is a prominent mark for vessels entering that passage or bound for Surigao.

The E part of the island is covered with coconut trees and has a sandy beach; the W part, which is higher than the E, is woody with a rocky coast. A tower stands at the E end of the islet. The islet is closely fringed by a steep-to reef, and there are depths of more than 18.3m, about 0.3 mile offshore. There are numerous detached patches in the vicinity of the islet.

Surigao (9°47'N., 125°30'E.)

World Port Index No. 59340

6.34 Surigao, the capital of Surigao Province, stands on low land on the E side of the mouth of the Surigao River in a position about 4 miles SE of Bilaa Point. The town is of considerable importance because most of the trade of eastern Mindanao passes through it. There are extensive mining operations in this area. A limited amount of gold concentrates is shipped.

Tides—Currents.—The tidal currents off this part of the coast in the W end of Hinatuan Passage set NW on the rising tide and SE on the falling tide.

They attain a velocity of 7 knots in the narrow part of the passage.

There are strong rips and swirls in the vicinity of Bilaa Shoal and Basol Island as well as in parts of Hinatuan Passage.

Depths—Limitations.—The Surigao River, discharging on the W side of Surigao, has a depth of 0.3m over its bar at LW. The mouth of the river is blocked by the ruins of an iron bridge.

The E half of Bilanbilan Bay has a number of dangerous steep-to 0.5 to 5m patches that lie between about 1.5 miles and 1 mile E of Bilanbilan Point. A 7.3m shoal is charted 1.25 miles ENE of the light at Surigao.

A dangerous wreck lies about 0.1 mile ENE of the light, and another wreck lies about 0.4 mile SE of the light.

A concrete wharf, suitable for inter-island vessels, is situated on the SE side of Bilanbilan Point. The wharf is 168m long, with depths of 5.5 to 9m alongside. An extension, 72m long in a NE direction, has a controlling depth of 4.6m alongside.

There is an L-shaped pier, with a berthing face 28m long and a depth of 10m alongside, at which vessels are loaded by conveyor.

Cargo operations for large vessels are handled at the anchorage. Loading or discharging is reported to be slow because of the difficulty in operating barges in the exposed anchorage. The maximum permissible size of vessels allowed at baseport is 150m in length, 8m draft at MLLW.

Aspect.—The port area does not show up until a position E of the light is reached. The numerous large buildings in Surigao are visible from well offshore. The provincial capitol and the red church dome, with its yellow tower, are prominent. Two spires near the beach on the E side of the town are useful landmarks for vessels approaching the wharf.

The port of Surigao is located on the W side of Bilanbilan Bay in a position about 0.5 mile SE of the town. Bilanbilan Point, the W entrance of Bilanbilan Bay, lies about 0.5 mile SE of Surigao.

The shore bank fringing Bilanbilan Point extends to 0.15 mile E of the point, where a depth of 11.9m has been reported. Port Surigao is a Port of Entry.

A small inlet at the W end of the bay recedes about 0.3 mile SW between Bilanbilan Point and a low point about 0.3 mile S.

Pilotage.—Pilotage is available, but a 24 hour notice is required. Pilots board 1 mile N of Basol Island by tug which is fitted with VHF.

Anchorage.—Vessels can anchor, in 26 to 29m, sand, within a circle with a diameter of 0.5 mile located E of the light. This anchorage lies close off the steep-to edge of the shore bank and is exposed to the Northeast Monsoon.

Some protection is afforded by the islands to the NE. Ships over 140m in length should not anchor within about the 20m curve fronting the bay.

Caution.—Vessels can approach Surigao from the W by passing either side of Basol Island, or from the E through Hinatuan Passage. The shore bank fringing Bilanbilan Point has been reported to have extended farther offshore.

Vessels are advised to round the N and E sides of Bilanbilan Point at a distance of not less than about 0.1 mile.

6.35 Kabo Island (9°47'N., 125°33'E.) is the northernmost of several low mangrove islands that are practically part of the coast, from which they are separated by very narrow creeks.

Kabo Reef, a 3.6m coral head, is a steep-to danger that lies on the S side of Hinatuan Passage about 0.8 mile NNW of the NE extremity of Kabo Island. A 4.9m patch lies 0.4 mile S of Kabo Reef.

Between Kabo Island and Bitogan Point, about 5 miles ENE and at the N end of Bayagnan Island, the low mangrove coast is fronted by numerous small islands which lie so close to each other and the shore that they appear as part of the mainland.

The above islands, mostly low and covered with mangroves, lie up to 1 mile or about 5 miles from the coast of Mindanao. Many of the islands have no hard land, and the tide rises in the mangroves to a depth of about 0.6m.

The network of narrow channels and creeks between these islands and the coast are navigable only by small boats with local knowledge. This low shore is backed about 1 to 2 miles inland by a coastal range that rises abruptly to summits of 91 to over 396m.

Bayagnan Island (9°47'N., 125°39'E.), the largest of the above islands, lies about 4.3 miles E of Kabo Island. Telegraph Mountain, a sharp peak 252m high and covered with tall green trees, is a conspicuous summit near the SE end of the island. The island is well inhabited, and there are numerous houses.

The village of San Jose is situated on the SE end of the island. Bitogan Point, the N end of Bayagnan Island, rises to a height of 83m less than 0.5 mile S.

Sugbu Islet, 65m high and wooded, lies on the outer part of a reef which extends from the NE side of Bayagnan Island. Sagasae Islet, 53m high, lies on the end of a steep-to reef that extends nearly 0.8 mile SE from the SE end of Bayagnan Island.

6.36 Masapelid Passage (9°44'N., 125°37'E.), the N entrance of which lies on the W side of Bayagnan Island, is narrowed to less than 0.25 mile by dangerous reefs and shoals,

and the tidal currents are very strong. The channel is unmarked and requires local knowledge.

Hinatuan Island (9°47'N., 125°43'E.) is high and conspicuous. From a distance it appears as two islands, the large S part being separated from the small N part by a narrow neck about 9.1m high. The S part is 346m high and has large patches of bright red soil showing through the sparse growth. The N part presents nearly vertical, dark, stone cliffs and rises to a 185m summit. The island is uninhabited.

Hinatuan Passage—West Part

6.37 **Hinatuan Passage** (9°50'N., 125°45'E.), connecting the S end of Surigao Strait with the Pacific Ocean, is deep and clear of dangers except for Kabo Reef and **Hinatuan Rock** (9°41'N., 125°46'E.), which lies about 4.5 miles SSE of Hinatuan Island. The narrowest part of the passage is about 1.3 miles wide between Rasa Island and Lapinig Island, an islet to the S.

The tidal currents follow the trend of the passage; however, the flood current sets W from the Pacific Ocean toward Surigao Strait and the ebb current in the opposite direction.

They attain a velocity of about 7 knots between Kabo Island and Rasa Island.

A velocity of 10.5 to 11 knots has been reported about 1 mile off Rasa Island; however, the velocity was about 7.5 knots at a distance of about 0.5 mile off that island. There are heavy rips and swirls at certain stages from Kabo Reef to Hinatuan Island.

These are more severe in the narrow part of the channel during the flood current, particularly in the vicinity of Kabo Reef. In the deep, very narrow channel on the N side of Rasa Island, the current practically becomes a race, and during the ebb current it produces heavy rips and swirls where it joins the current coming more slowing around the S side of the islet.

The time of HW slack abreast Rasa Island occurs about 40 minutes before HW at Surigao, while LW slack occurs generally occurs about 50 minutes before LW at Surigao, although occasionally the times of both high and LW slack will vary from the foregoing by as much as 40 or 50 minutes.

Less current is reported in Banug Strait than along the longer route around Hinatuan Island. The strait is deep and clear of dangers.

Pilotage.—Pilots for Hinatuan Passage can be obtained at Surigao, at the W entrance and Cantilan, at the E entrance.

Anchorage.—Anchorage can be taken out of the strength of the tidal currents in Panag Bay, a confined bight that recedes about 1 mile S from close SE of **Lapinig Island** (9°46'N., 125°35'E.). The best anchorage is in 37m, sand, about 0.8 mile S of Lapinig Island, and nearly 0.5 mile SW of a conspicuous bare, white sand cay.

Anchorage can also be taken in 37m, sand, near the middle of Panag Bay.

Caution.—Hinatuan Passage is not recommended for large vessels, low powered vessels, and sailing vessels unless local knowledge is possessed. Strong currents, heavy rips, and swirls are found throughout the passage, especially in the vicinity of Rasa Island. In case of necessity, vessels can anchor off Surigao to wait for slack water.

If Banug Strait is used, caution must be exercised in order to avoid Hinatuan Rock, which lies on the track to it.

Dinagat Island—West Side

6.38 Between Rasa Island and Kanhatid Point, about 16.5 miles NNW, the coast on the E side of Surigao Strait trends along the W side of Dinagat Island and is indented by numerous bays and bights. Most of the more prominent points are closely fringed by steep-to reefs, with depths of more than 37m about 0.3 mile offshore, but reefs and foul ground lie up to about 0.8 mile offshore in the bays and bights.

These dangers are contained within the 37m curve, which gives little warning because of its close proximity to them. Much of this coast is low, but it rises abruptly to a coastal range with summits over 305m high less than 1 mile inland.

Numerous detached islands and dangers, with deep water between them, lie up to about 9 miles off this coast and are described below.

Rasa Island (9°48'N., 125°35'E.), 7.6m high, is the S islands contiguous with the S end of Dinagat Island. A light, 3m high, stands on the S edge of Rasa Island, which lies on a partly drying and extensive reef. A 12.8m patch lies 0.4 mile E of the light. The NE side of the islet is steep-to, and there are depths of more than 37m in the narrow unobstructed channel between it and Doot Islet.

This channel is not recommended because of the very strong tidal currents. As the current changes from flood to ebb very quickly, there is scarcely any slack water.

Between Rasa Island and the S end of Dinagat Island, about 5.5 miles NE, there is a group of islands that lie so close to each other and to Dinagat Island that they appear as part of that island. The passages separating these islands are so narrow that they are navigable only by small craft.

6.39 **Doot Islet** (9°49'N., 125°36'E.), about 0.3 mile NE of Rasa Island, lies close to the SW end of Nonoc Island, from which it is separated by a very narrow and shallow channel. The S part of the islet is low and covered with mangroves. Three conspicuous hills stand on the N part of the islet.

A reef extends more than 0.25 mile W from the islet almost to the village of Nonoc, on the SW end of Nonoc Island, where the reef terminates in several above-water rocks. A 12.2m patch lies 0.6 mile W of the SW extremity of Nonoc Island.

Nonoc Island (9°51'N., 125°38'E.) is the largest of the islands contiguous with the S end of Dinagat Island. On its W side, this hilly island attains a height of 335m in the summit of Mount Conico.

There are several prominent, green grassy hills at the base of the SE slope of Mount Conico. Although the hills at the W and E ends of the island are heavily wooded, the ridges between are nearly bare, with bright red soil showing.

Port Nonoc (9°49'N., 125°37'E.) is situated 2 miles SSE of Mount Conico. Nickel and cobalt are loaded at a T-shaped wharf, 260m in length. Minerals are loaded by coveyor belt. Ammonia and naphtha are unloaded at a jetty close N of the wharf. Tankers secure to dolphins at the jetty. Depths alongside are unknown. No provisions are available at the port. Pilots and tugs are available from Surigao.

Port Gaboc (9°52'N., 125°41'E.), formed between the S end of Dinagat Island and the E end of Nonoc Island, is easily made out from seaward. The shores are bold and fringed by a narrow steep-to reef.

The reef projects about 0.3 mile N from the S shore of Port Gaboc, constricting the entrance of Gaboc Channel to about 0.2 mile between about the 10m curves. Gaboc Island, 30m high, is a wooded islet lying on the projecting reef.

Small vessels can take sheltered anchorage, in about 27.4m, close to the N shore of the port.

Awasan Island (9° 54'N., 125° 38'E.) lies at the N end of Nonoc Island, of which it appears to be part, being separated from the latter by a shallow channel less than 0.1 mile wide. This wooded island is fringed with mangroves, except for a sand beach at its NW end. There is a house on this latter end of the island.

Hanigad Island (9° 53'N., 125° 35'E.), hilly and wooded, lies about 0.3 mile off the NW sides of Nonoc Island and Awasan Island.

The mangrove shores are interrupted by conspicuous sand beaches and coconut groves on the W side of the island and at its S end near the village of Hanigad. Kantiasay Bay, between Hanigad and Nonoc Islands, is blocked at both ends by rocks and shoal water.

A small bay that lies between the N part of Hanigad Island and Awasan Island is encumbered with reefs. Dangerous foul ground and depths of less than 1.8m lie up to about 0.8 mile N of the island.

Sibale Island (9° 54'N., 125° 34'E.), which rises to a sharp summit, lies close W of Hanigad Island, being separated from the latter by a channel less than 14m wide. The island is cultivated and is noticeably greener than the other islands.

There are sandy beaches in the bay. The village of Zaragoza lies on the N end of the island; hemp and copra are shipped from here. A small detached reef, with a least depth of 4.6m, lies about 0.8 mile W of the N end of Sibale Island. A small bank, with a depth of 8.2m, lies 0.25 mile SW of the S extremity of the island.

6.40 Hikdop Island (9° 53'N., 125° 31'E.) is rugged, wooded, and narrow. There are several villages, of which Buenavista on the SW side of the island, is the most important. The channel between Hikdop Island and Sibale Island is about 0.8 mile wide and can be safely navigated by keeping in mid-channel. The N part of the island is mostly covered with coconut trees and grass, while the S part is mostly wooded.

Onate Rock (9° 52'N., 125° 30'E.) lies about 1 mile SW of the middle of the SW side of Hikdop Island. It is a small coral reef with several black rocks, one of which is awash at HW.

Beelzebub Reef, with a least reported depth of 3.3m, is a small reef that lies about 0.5 mile W of Onate Rock; a deep but narrow channel lies between them. Both of these dangers are steep-to and have depths of more than 37m close around them.

Danaon Island (9° 56'N., 125° 30'E.) is an islet that lies about 0.8 mile W of the NW end of Hikdop Island. It is low, flat, sandy, and covered with coconut trees on the E side. The remainder of the island is rocky and wooded.

A rock, 1.2m high, lies on a small detached reef about 0.5 mile NE of the island. Danaon, a small village, stands on the E side of the island. The area W of the village is planted in coconut trees.

Satan Rock (9° 56'N., 125° 28'E.), a conical black, steep-to above-water rock, lies about 1.5 miles W of Danaon Island. It may be passed fairly close on either side. A detached 14.6m depth lies about 0.5 mile WSW of the rock.

Sumilon Island (9° 55'N., 125° 26'E.) is the westernmost of the islands and dangers off this section of Dinagat Island.

A sand spit extends about 0.3 mile SE from the islet. Two conspicuous rocks, one of which is 8.2m high, lie on the outer end of the spit. A concrete tower, 9.8m high, stands at the SE end of the island. A light is shown from the SW end of the Island.

Awasan Bay (9° 56'N., 125° 36'E.), entered between Zaragoza Point, the N tip of Sibale Island, and Dinagat Point, lying about 3.5 miles NNE of Zaragoza Point, has depths of more than 27m in its central part, but steep-to reefs and shoal patches, with depths of less than 0.9m, fringe the shores of the bay.

Two islets lie at the head of the bay, and the SE one marks the N side of the entrance of Gaboc Channel. The channel leading to this entrance is narrow and tortuous.

Gaboc Channel, separating the S end of Dinagat Island from Awasan Island and Nonoc Island, is a deep and narrow channel that is navigable only by small craft with local knowledge.

6.41 Dinagat Point (9° 58'N., 125° 35'E.) is a wooded promontory, 48m high, extending from the W coast of Dinagat Island. Dinagat, a small town, stands on the N slope of Dinagat Point.

Tagbayakao Islet (9° 59'N., 125° 35'E.), a small cone-shaped rock 31m high, lies about 1 mile NNW of Dinagat Point. The islet is connected to the Kanhinaud Point peninsula close N by a partly drying reef. Foul ground extends 0.25 mile S from the islet. There are bushes on the summit of the islet.

An irregular bight, most of which is encumbered with reefs and shoals, indents the coast to a distance of about 1.8 miles E between Dinagat Point and Tagbayakao Islet.

Dinagat Cove and Masiub Cove lie in the SE and NE ends, respectively, of this bight. Deep channels lead into these coves, but the reefs and dangers fringing their shores limit their use to small vessels.

Dinagat (9° 58'N., 125° 35'E.) can be identified by its church and schoolhouse. A small pier E of the town has a depth of 1.5m alongside. Small craft from Surigao often call at Dinagat to load copra. Lighters can be obtained from that port. The town has a post office. Fresh stores in limited quantities can be obtained.

Anchorage.—Anchorage for vessels calling at Dinagat is anywhere off the town, preferably just N, in 18.3 to 37m. This anchorage is fully exposed to the Southwest Monsoon, but offers some protection from the Northeast Monsoon. It is reported that currents in this vicinity are strong at certain times of the year. The approach to the outer anchorage should be made from the S of the Cabilan Islets.

Smaller vessels, with local knowledge, can anchor within Dinagat Cove, in depths from 26 to 37m.

6.42 Capaquian Island (9° 59'N., 125° 33'E.), lying across the entrance to Masiub Cove and Dinagat Cove, is 79m high and wooded. Black rocky ledges lie on the SW side, while the NE side is bordered by mangroves.

A reef, partly awash, lies with its outer end 0.7 mile SE of the S extremity of the island. Dakit Rock, 1m high, lies 0.4 mile from the W side of Capaquian Island.

Cabilan Islets (9° 57'N., 125° 32'E.), two in number, lie on the same reef, 0.9 mile SSW of Capaquian Island.

The W islet is 42m high, while the E islet is only 26m high. A detached reef, with a depth of 0.3m, lies 0.35 mile ESE of the E islet.

Unib Island (10° 01'N., 125° 31'E.), 1.25 miles N of the N extremity of Capaquain Island, is 198m high, rugged, and densely wooded. Sibanac Island is separated from the SW side of Unib Island by a narrow deep channel.

Baong Rocks (9° 59'N., 125° 29'E.), 1m high, lies 0.3 mile W of the S side of Sibanac Island. Drying rocks and a 0.3m patch lie 137m W and ESE, respectively, of Baong Rock. With W and SW winds, the sea breaks heavily over these rocks.

Viray Islet (10° 00'N., 125° 31'E.), 24m high and wooded, lies 0.75 mile S of Unib Island.

Partly drying reefs extend 0.4 from its NE side. A rocky islet, with some coconut trees, lies 0.5 mile E from the E extremity of Sibanac Island, with a drying reef lying 137m E of the islet.

6.43 **Kinhinaud Point** (10° 00'N., 125° 34'E.), the W extremity of a rather prominent peninsula, lies about 1.3 miles NW of Tagbayakao Islet. A hill, 119m high, lies near the middle of the peninsula about 1 mile E of the point and is conspicuous from a considerable distance.

The point is bordered with mangroves and closely fringed by a steep-to reef that bares at LW.

Melgar Bay (10° 03'N., 125° 32'E.) occupies a bight that indents the coast between Kanhinaud Point and Kambagio Point, about 4.5 miles NW. The low shores of the bay rise abruptly to high hills, which attain a height of more than 305m about 2 miles N of the head of the bay.

A broken series of ridges culminates in the summit of Mount Tristan, which lies on the E side of Dinagat Island about 4.8 miles NE of the head of the bay.

The SE side of the bay trends about 3.8 miles NNE from Kanhinaud Point to Mahangin Point and is indented by numerous small deep coves. The village of Wilson is situated near the head of Kambay Cove, which indents the coast between **Kansadok Point** (10° 02'N., 125° 34'E.), about 2.3 miles NNE of Kanhinaud Point, and Kanayut Point, about 0.8 mile farther N.

The latter point has a cliffy face, about 9.1m high, that is conspicuous from many parts of the bay. Vessels desiring to call at Wilson can anchor N of the town, in 18 to 37m.

Mahangin Point (10° 03'N., 125° 35'E.), about 0.8 mile NE of Kanayut Point, has a black rocky beach, and is bold and steep-to. The two points are at the NW end of a prominent, wooded peninsula.

A deep narrow channel, about 0.2 mile wide, lies between Mahangin Point and Sibukauan Island, close N. It forms the common entrance of several deep coves at the head of Melgar Bay.

These coves afford sheltered anchorage for moderate-sized vessels with local knowledge.

Sibukauan Island (10° 04'N., 125° 35'E.), 30m high and easily identified, is a wooded islet that lies at the head of Melgar Bay. It is closely fringed by a steep-to reef, and a narrow reef, parts of which dry at LW springs, which connects the islet with Bilabid Point, about 0.3 mile N.

The N side of Melgar Bay recedes about 1.8 miles N between Bilabid Point and Kambagio Point, about 2.8 miles W. The shore, which is mostly steep-to, is rocky around the points and closely fringed by reefs, which extend up to about 0.5 mile S from a position on the shore about 1.8 miles NE of Kambagio Point.

A detached, steep-to coral patch, with a least depth of 1.8m and which usually shows plainly, lies about 0.3 mile SSE of a point about 0.8 mile NE of Kambagio Point.

Kambagio Point (10° 04'N., 125° 31'E.) is steep, rocky, and rises abruptly to the 61m summit of a grassy conical hill. It is prominent from the W and SW. A reef, that partly dries at LWS, extends nearly 0.5 mile SE from the E side of the point. The small village of Melgar is situated on the E side of the point.

Anchorage, sheltered from SW winds by the above reef, can be taken E of the village in about 35m or more.

Kanhatid Point (10° 04'N., 125° 30'E.), the W entrance point of Babas Cove, rises abruptly to a hill 79m high about 0.5 mile N. An islet, 15.2m high, lies close S of the point, to which it is practically connected.

6.44 Between Kanhatid Point and Tungo Point, about 4.8 miles NNW, there are a number of islets that lie up to about 1.5 miles offshore about halfway between the two points. These high and mostly steep-to islets have deep channels between them and shelter a number of small inlets that indent the S part of this section of the coast.

Kakub Point, which terminates at its S end in a 15.2m hill, lies about 2 miles NNW of Kanhatid Point. A narrow steep-to reef, on which there are a number of small and partly-wooded rocky islets, 6.7 to 33m high, extends about 0.8 mile S from the point.

The largest islet is located on the S end of the reef. A deep bay, less than 0.5 mile wide, lies on the E side of Kakub Point and the reef extending S from it. The steep-to shores of this bay are practically a wall of coral from 3 to 9m high.

Twin Islets (10° 05'N., 125° 29'E.), 18.3m high, lie in the S approach to San Roque Channel, about 0.3 mile SW of the S end of the above-described reef. They are located on a steep-to reef that extends about 0.2 mile N from them. Although the islets may be passed at a distance of 0.1 mile on either side when approaching or leaving San Roque Channel, the channel on the E side of the islets is only about 91m wide between the reefs.

Hagakhak Island, 43m high, lies about 0.3 mile W of Twin Islets and it is separated from them and from the reef extending S from Kakub Point by a deep channel about 0.1 mile wide. The SE and W sides of the island are closely fringed by steep-to reefs, and a steep-to reef, on which there are several islets, extends about 0.3 mile from the NE side and N end.

An islet, 21.3m high, lies at the NE end of the reef. Tinao Islet, 10.6m high, lies close off the edge of the island. There are two rocky columns on the W side of Tinao Islet.

A deep channel, about 0.1 mile wide, separates the reef fringing the NE side of Hagakhak Island from the islets off the S end of Kotkot Island.

Little Hagakhak Island lies about 0.3 mile SW of Hagakhak Island. The islet is steep and very prominent. It is closely fringed by steep-to reefs, and a rock, 15.8m high, lies at the SE end of the islet.

6.45 **Kotkot Island** (10° 06'N., 125° 29'E.), 52m high and thickly wooded, lies less than 0.5 mile N of Hagakhak Island and is separated from the coast, about 0.1 mile NE, by San Roque Channel. Several islets lie on the edge of the reef fringing the S end of the island.

Rabo Rock, 7.6m high, lies on the E edge of a reef that extends about 0.3 mile ESE from the SE end of the island. The deep channel between this latter reef and Kakub Point is only about 55m wide. A detached 3.2m patch lies about 0.3 mile N of the NW end of the island.

Puerto Princesa (10° 06'N., 125° 29'E.) is a small village that lies on the coast about 0.8 mile NW of Kakub Point. A hill, 104m high, lies close behind the village and appears as a perfect cone from SE or NW.

San Roque Channel, which lies between the coast at Puerto Princesa and Kotkot Island, is narrowed to a width of about 91m by the reefs fringing each side. The channel has a depth of about 9.1m off Puerto Princesa, and depths increase from there toward the S and N entrances.

A short distance SE of the village the channel widens into a basin, about 0.3 mile in width and a little more in length. The basin is clear of known dangers except for two reefs that extend about 0.1 mile from the N side.

Good anchorage can be taken in the basin, in 40 to 46m. The channel leading S from the basin narrows to a width of about 55m between the reef fringing the E side of Rabo Rock and that fringing the W side of Kakub Point.

Tungo Point (10° 08'N., 125° 29'E.) is a steep-to point that rises to a 93m summit about 0.3 mile southward.

6.46 Between Tungo Point and Pelotes Point, about 4.3 miles NNE, the coast is indented by numerous small bays and bights. A number of steep-to islets and above and below-water rocks lie up to about 2.5 miles offshore.

Hills rise abruptly to heights of about 171 to 256m about 0.5 mile inland.

Kanhanusa Island (Kanhanus Island) (10° 09'N., 125° 29'E.), 99m high, is an islet that lies about 0.5 mile NNE of Tungo Point and has Tamburay Island, a smaller islet, at its S end. Although the passage between them and the coast, about 0.3 mile E, is deep, there are a number of steep-to reefs that render it navigable only by small craft with local knowledge.

Kayitan Bay (10° 08'N., 125° 29'E.), which has depths of 20 to 55m, indents the coast on the E side of Tungo Point. It is entered through a deep channel, about 0.3 mile wide, between the latter point and Tamburay Island.

A 3m patch lies in the central part of the bay about 0.5 mile SE of Tungo Point, and there is a 0.9m patch near the head of the bay. A narrow drying passage leads into a cove at the S end of the bay.

Fairly good anchorage can be taken, in 38m, mud, about 0.2 mile E of the entrance of the bay. Care must be taken to avoid the above dangers and the reefs extending toward Tamburay Island from the N side of the bay.

Arellano (10° 08'N., 125° 30'E.), a small village, is situated on the coast about 0.5 mile E of the NE end of Kanhanusa Island. There is a sandy beach in front of the village. A small steep-to islet, with a reef extending about 0.2 mile S, lies about 0.5 mile NW of the village.

6.47 **Kanihaan Island** (Nanihaan Island) (10° 10'N., 125° 28'E.) is the westernmost of the islets in this vicinity. A small detached reef, with a depth of about 0.9m, lies about 0.3 mile W of Kanihaan Island and is steep-to.

Heavy rips and overfalls in the vicinity make the reef difficult to see. A 23.5m coral patch is charted about 1.3 miles W of the island.

Currents have been experienced setting S off the points of Dinagat Island and around Kanihaan Island. They were very strong in the vicinity of the N end of Kanihaan Island and the reef close W. When the currents set N they were found to have very little strength as a rule.

Pelotes Point (10° 13'N., 125° 30'E.) is the steep, rocky, NW end of the Tabunan Peninsula. This wooded peninsula, 180m high, is connected to the coast about 2 miles SE, by a short narrow isthmus, about 30m high. The village of Tabunan is situated on the W side of the peninsula about 0.8 mile SSE of the point.

The Tabunan Islets, 15 to 64m high and rocky, lie up to about 0.5 mile offshore close S of the point. A rock, 17.7m high and topped with bushes, lies less than 0.25 mile NE of the point. A detached 10.1m patch lies nearly 0.5 mile NNW of the point.

Binaliu Rocks (10° 12'N., 125° 29'E.) are two rocks that lie about 1 mile WSW of Pelotes Point. The sea breaks over them in moderately heavy weather. Pelotes Rocks are wooded and lie about 1 mile N of Pelotes Point. They are located close together on a steep-to bank about 0.3 mile long.

6.48 Between Pelotes Point and Esconchada Point, about 7 miles NNE, the coast is indented by several bays, separated by high steep-to points. The coastal ridge of hills rises abruptly to summits more than 335m high about 1 mile inland.

Libjo Bay (10° 13'N., 125° 31'E.) indents the coast between Pelotes Point and Tamoyauas Point, about 2.25 miles NNE. The latter point is high and wooded, with rocky ledges at its foot. The village of Libjo is situated at the head of the bay. Fairly protected anchorage can be taken, in 31m, about 0.3 mile NW of Libjo.

Little Layauan Bay lies close S of Layauan Bay from which it is separated by a steep rocky bluff. The greatest depths are on the N side of the bay.

Layauan Bay (10° 17'N., 125° 32'E.) about 2 miles N of Tamoyauas Point, is a small narrow inlet. The entrance is about 0.3 mile wide between two high rocky points. The mangrove covered, rocky shores are fringed with steep-to reefs, 50 to 91m wide.

There are depths of more than 26m as far as a position S of a sand spit on the W side of the entrance of the N arm of the bay, but there are reefs and foul ground E of this position.

A channel, 137m wide, leads up the middle of the N arm and has depths of about 18.3m for about 0.3 mile. In entering the N arm, the steep-to sand spit mentioned above should be passed

close to in order to avoid the reefs that extend from the point on the E side.

Anchorage, protected from all but W winds, can be taken in the middle of the bay, in 29m.

Small vessels can enter the N arm, where there is a landlocked anchorage in a depth of 18m.

Esconchada Point (10° 19'N., 125° 31'E.), 76m high, is a broad, partly-wooded bluff headland that lies about 2.25 miles N of Layauan Bay. Part of the bluff has a steep, reddish, rocky face that is prominent. The point is fringed by a steep-to rocky beach. There are heavy rips off Esconchada Point, particularly during the rising tide.

6.49 Between Esconchada Point and Desolation Point, about 12 miles NE, the steep-to coast is indented by two large open bays. The ridge of hills and mountains closely backing the coast increases in elevation toward the N end of Dinagat Island and attains a height of about 914m about 2 miles inland.

Mount Redondo, 934m high, lies on the E side of Dinagat Island, about 2.8 miles SE of the head of Looc Bay.

Berrugosa Point (10° 23'N., 125° 33'E.), which lies about 4.5 miles NNE of Esconchada Point and rises abruptly to a 201m summit, is the N end of a hilly peninsula that extends about 2.25 miles NNW from the coast. There is a depth of 3.7m close N of Berrugosa Point.

Looc Bay (10° 24'N., 125° 35'E.) indents the coast between Berrugosa Point and Babatnon Point, a low wooded point about 3.5 miles ENE. The shores are fringed by narrow steep-to reefs, with depths of 11 to 18.3m close off them. Puyo Island lies about 0.5 mile off the E side of the head of the bay. The islet appears steep-to except for reefs and shoal water that fringe its W and N sides.

The villages of Loreto and Santiago are situated at the head of Looc Bay. There is a post office and radio station at Loreto. Small inter-island vessels call here occasionally.

Anchorage can be taken W of Puyo Island and about 0.5 mile N of Loreto, in about 27m. Fair anchorage can be taken between the SE side of Puyo Island and the coast, in about 18 to 22m. Both anchorages are exposed to N winds.

6.50 **Kayasa Islets** (10° 26'N., 125° 34'E.) are two rocky and wooded islets that lie in the approach to Looc Bay about 2.5 miles NNE of Berrugosa Point.

They are located about 0.5 mile apart on an 11 to 18m bank, and there are depths of about 6.4m close NE of the S islet.

A rock lies awash about 0.1 mile W of the S islet, and a detached steep-to rocky patch, with a depth of 1.8m, lies about 0.3 mile NW of the N islet. Caution should be exercised to keep well clear of these dangers.

The tidal currents attain a velocity of 5 or 6 knots in the vicinity of the Kayasa Islets and between them and the coast to the E and Hibuson Island to the W. They cause rips off some of the points on the coast of Dinagat Island.

There are also tide rips NE and S of the islets.

The coast, for a distance of about 3.8 miles SW of Desolation Point, contains several low rocky points with small white sand beaches between them.

Desolation Point (10° 28'N., 125° 39'E.) is low and rocky. The land rises abruptly from the point and about 1.5 miles S it attains a height of 438m in the northernmost summit of the coastal ranges. Breakers were reported within 1 mile N of Desolation Point.

Hibuson Island (10° 27'N., 125° 29'E.), 10 miles W of Desolation Point, is 189m high, and wooded. Its coasts are mostly steep-to.

There is anchorage off Hibuson village, which stands at the head of Tinaga Cove, on the E side of the island, in a depth of 37m, protected from all except E winds. A bank, with depths from 2 to 4m, extends 0.3 mile from the S side of the cove.

Little Hibuson Island, an islet, lies so close to the SW side of Hibuson Island that it appears to be part of the latter and is connected thereto by reefs. Kanhandon Point, the NW extremity of the island, is prominent.

The tidal currents are strong in the vicinity of Hibuson Island and cause rips off the points of the island.

Caution.—It is advisable to pass NW around Hibuson Island in order to avoid the dangers eastward. Vessels may pass between Hibuson Island and the N end of Dinagat Island, but the currents are very strong and caution must be exercised to keep clear of the Kayasa Islets.

A branch of the North Equatorial Current flows SW at a velocity of 0.5 to 1 knot at distances greater than 4 miles off the NE coast. Within 1 mile offshore there are eddies, and the direction of the current is influenced by the tides.

The flood current sets from the Pacific toward Surigao Strait, the ebb current in the opposite direction. In the narrow channels between the islands the tidal currents are strong and in some places there are tide rips and dangerous whirlpools.

At the E entrance of Hinatuan Passage the flood current sets NW and the ebb current sets in the opposite direction. The velocity is reported to reach 2.5 knots at times.

Dinagat Island—East Side

6.51 The E side of Dinagat Island is bold and not heavily wooded. Because of the lack of good harbors, the strong tidal currents, and dangerous ground encumbering the approaches through Dinagat Sound, this side of the island is seldom visited by vessels.

The E side of Dinagat Island trends S from Desolation Point, the N extremity of the island, for about 37 miles to **Gaboc** (9° 52'N., 125° 41'E.).

A mountainous ridge extends along the coast. The summit of the island is Mount Redondo, about 7 miles S of Desolation Point. The lower slopes and valleys are wooded. Growth on the higher slopes is sparse. Spurs from the mountain terminate at the shore in steep cliffs.

The shore is fringed with reefs extending as far as 0.5 mile offshore. There are no towns. The E coast is a lee shore and is exposed to the Pacific. A safe coastal track leads about 1 mile E of the salient points with a least depth of 20m.

Between Desolation Point and Kalanugan Point, about 5.25 miles SSE, the coast is bold and steep-to. Masdang Cove, about 1.8 miles S of Desolation Point, affords shelter for boats. A landing can usually be made in foul weather.

Between Kalanugan Point and Malinao Inlet, 8.5 miles SSW, the coast is a continuous mountain ridge rising abruptly from shore.

Mount Redondo, the summit of Dinagat Island, is about 3.5 miles SW of Kalanugan Point. Narrow steep-to reefs fringe the shore.

Malinao Inlet (10° 15'N., 125° 38'E.) is about 0.5 mile wide at the entrance between heavily wooded mountains rising steeply on either side. Foul ground extends about 0.5 mile E and about 0.8 mile SE from the N entrance point of the inlet and drying reefs fringe both N and S entrance points.

Small craft can obtain sheltered anchorage in the inlet and vessels with local knowledge can anchor off the foul ground during the Southwest Monsoon. Approach should be made from SE, passing SW of the foul ground off the N entrance point.

Between Malinao Inlet and Gaas Bay, 3.5 miles S, the coast consists of wooded mountains rising steeply from the shore which is fringed by reefs less than 0.25 mile wide.

6.52 **Peninsula Point** (10° 10'N., 125° 41'E.) is a 161m high densely wooded peninsula that lies about 5 miles SSE of Malinao Inlet. It appears flat on top. Reefs and foul ground fringe the SE and NE sides of the peninsula up to 0.5 mile offshore.

Gaas Bay (10° 11'N., 125° 39'E.), on the N side of Peninsula Point, is about 1.5 miles wide and indents the coast about 1 mile. The shores of the bay are fringed with reefs which are about 0.3 mile wide at the head of the bay.

Depths in the bay vary from 51m at the entrance to about 14.6m at the head. A small village is on the S shore of the bay. Vessels can take temporary anchorage about 0.3 mile NE of the village, in 14.6m.

Gaas Inlet is a tortuous channel with steep rocky banks leading from Gaas Bay SW to a small basin about 1.5 miles long. It affords good protection for small vessels with local knowledge.

Between Peninsula Point and Penascales Point, 6.5 miles to the SSE, the coast is bold and fringed with reefs extending up to 0.3 mile offshore.

Penascales Point (10° 03'N., 125° 42'E.) is fringed by a steep-to reef about 0.3 mile wide. A group of large black rocks, 6.7m high, is on the reef and is conspicuous from N and S. An 11.3m bank is about 0.3 mile E of the point.

The W edge of the dangerous ground in Dinagat Sound is about 2.8 miles ESE of Penascales Point.

Between Penascales Point and the N entrance point to Lahi Bay, about 6.25 miles SSW, the coast is bold and fringed with reefs and foul ground extending as far as 0.25 mile offshore. There are several small coves along the coast.

Lahi Bay (9° 57'N., 125° 40'E.) indents the coast about 1 mile to the W. Reefs and foul ground extend up to 0.5 mile from the head of the bay and its S shore. There are depths of 33 to 44m in the bay.

Kagdyanao Bay (9° 55'N., 125° 41'E.), about 1 mile wide, lies close S of the Lahi Bay, and is nearly blocked by reefs. Kagdyanao Village is at the head of the bay.

There is a recess in the reef where small vessels with local knowledge can anchor off the village, in 22m.

Tabuk Island, 45m high, is on the shore reef projecting about 0.8 mile E from the N side of the entrance to Kagdyanao Bay. The island is covered with grass and trees. A 16.4m bank is 1.75 miles ESE of the island.

Sayao Island, 37m high, is a sparsely wooded island about 0.5 mile NE of Tabuk Island. The SE end of Sayao Island is steep-to. Reefs extend as far as the island.

Dakit Rock, a conspicuous 3.9m rock, marks the NE extremity of the reef. A boat passage, about 0.1 mile wide with depths of 15 to 20m, is between Sayao Island and the reef fringing Tabuk Island.

The S end of Dinagat Island consists of a bold promontory fringed by a narrow steep-to reef.

Mount Gaboc (9° 53'N., 125° 41'E.), on the N side of Port Gaboc, is the highest peak of the promontory. It appears as a flat-topped ridge covered with scrub and it slopes about 3 miles N from the summit to an isthmus about 1 mile wide and 30m high.

Dinagat Sound

6.53 **Dinagat Sound** (10° 00'N., 125° 50'E.) is N of Hinatuan Passage between the NW side of Siargao Island and the E side of Dinagat Island. It is avoided by shipping because of dangerous ground and unknown dangers. The sound is encumbered with several dangerous reefs. The bottom is very uneven and there are numerous detached banks with depths of less than 18.3m.

Little is known about the tidal currents in Dinagat Sound except that they are strong.

Halian Island (9° 56'N., 125° 48'E.) is a sandy, wooded islet about 24m high. It is on the S end of a reef about 8 miles ENE of Mount Gaboc. Foul ground extends about 0.5 mile N from the reef.

The 20m curve is about 0.3 mile off the edge of a reef fringing the E and W side of the island and about 0.5 mile off the SW end of the island. The N end of the reef is marked by breakers.

There is a sandy beach at the SW end of the island where boat landings may be made.

Depths—Limitations.—A 10.3m shoal is on the N part of a 14.6m bank about 3 miles ESE of Halian Island. A deep channel about 1.5 miles wide is between the above shoal and the reef fringing Kangbango Island (Kagbangio Island). A 9.1m shoal is located about 3.5 miles NE of Halian Island and an obstruction is about 0.3 mile SW of this shoal.

The remainder of the known dangers in Dinagat Sound are contained within an area 6 miles square W of 125° 50'E and N of 10° N. The W limit of the dangerous ground is about 2.8 miles ESE of Penascales Point.

The least charted depth in this area, 6.1m, lies about 3.5 miles SE of that point.

Mindanao—Northeast Coast

6.54 The NE coast of Mindanao is bold and heavily wooded. Steep cliffs rise from the sea except for coastal lowlands bordering Becebos Bay, Carrascal Bay, and Lanuza Bay. The rivers are short swift mountain streams and fewer in number than most other parts of Mindanao.

The Dinuta Range trends parallel to the coast about 10 miles inland and averages about 1,158m elevation. Mount Legaspi, lying in a volcanic region about 8 miles WSW of Tugas Point, is an active crater which erupted many years ago.

There are no large ports or towns along this coast. The principal industry is mining. Placer is the shipping place for the surrounding mining district. The pilot station for the E entrance of Hinatuan Passage is at Cantilan village on the W shore of Lanuza Bay.

Typhoon tracks have crossed the NE coast of Mindanao with greatest frequency during the month of November and with the least frequency during February, March, and April.

Trade winds predominate during March and April. They may be NE, E, or SE and can seldom be distinguished from the Northeast Monsoon. The climatology of this coast is otherwise the same as the Surigao Strait area.

On the NE coast, at positions open to the Pacific, the effect of the tropic tides is less marked than in the inland waters of the archipelago and semidiurnal tides occur throughout lunation.

Magnetic compasses of vessels navigating these waters are greatly affected by the large iron deposits in the mountains between Claver Point and Tugas Point, and on Dinagat Island.

The N part of this coast borders Masapalid Passage and is a large mangrove swamp, interspersed with many tidal streams (esteros) that extend as far as two miles inland and form large islands of mangroves.

The hills nearest the coast are covered with grass and coconut trees and are detached from the mountains farther inland which are heavily timbered.

Cog Point (9° 41'N., 125° 36'E.), which forms the W side of the entrance of Canal Bay, is a steep hill covered with coconut trees.

The W side of the point is low and covered with mangroves. The point, which is also known as Cogbabagang Island, is prominent.

6.55 **Masapelid Passage** (9° 43'N., 125° 37'E.) is used occasionally by small coastal vessels with local knowledge. Its use by vessels without local knowledge is not recommended because detailed directions from the intricate channel, which is constricted by dangerous shoals and reefs, are not available. The tidal currents are strong and there are no good landmarks.

Bilabid Island (9° 45'N., 125° 38'E.) consists mostly of mangroves. The E side of the island is covered with grass and scattered coconut trees. A hill, with a conspicuous clump of trees on its summit, rises in the NE part of the island. Caye Island, about 0.5 mile SE of Bilabid Island, is a small island with mangroves on its W side and a sand beach on its E side.

Masapelid Island (9° 42'N., 125° 39'E.), mostly fringed by a narrow reef, lies about 0.5 mile S of Caye Island. The W part is wooded and there are many small peaks. The NE part is covered with grass and scattered trees.

The S part is a ridge which is heavily wooded on its W side and has cogon grass on its E side. The summit of the island is about 0.5 mile N of Sampetan Point, the S extremity of the island. Lakandula is a village on the W side of the island and is situated about 1 mile NW of Sampetan Point.

Canal Bay (9° 41'N., 125° 37'E.), entered between Sampetan Point and Cog Point, 1 mile E, is encumbered by several islands and dangers. Strong tide rips occur N of **Cog Point** (9° 41'N., 125° 36'E.).

Opong Island lies at the head of Canal Bay. The island is covered with vegetation and may be easily identified. It is composed of rough, jagged coral, eroded at the waterline and has a mushroom appearance.

Dinago Island, lying about 0.5 mile S of Opong Island, is covered with vegetation and has a similar appearance. Close E of Dinago Island there is a small islet with two summits. A rock awash lies about 0.5 mile E of the islet.

A 0.9m patch lies about 0.5 mile NE of the NE end of Dinago Island. Foul ground extends from the N side of Dinago Island and from the S side of Opong Island.

The NW side of Canal Bay is foul as far as 0.25 mile offshore and consists of low mangroves bordered shores in the N part. The S part rises to cogon-covered hills in the vicinity of Cog Point.

Placer (9° 40'N., 125° 35'E.), a small village standing on an unnamed point about 1 mile S of Cog Point, is the shipping place for the surrounding mining district.

The harbor is formed by a small bay between Cog Point and a large drying reef which extends about 0.6 mile NE from the town.

Bancay Islet is a large rock lying near the middle of the N side of this reef. An 8.2m patch lies in the approach to the harbor about 0.3 mile NE of the NE extremity of the reef. A 0.9m patch lies near the middle of the harbor about 0.2 mile N of Bancay Islet.

Anchorage.—Large vessels can anchor, in 22 to 24m, in the middle of the harbor.

There is a rock causeway with a timber landing at Placer with a reported depth of 3.9m at its head. A pier, with a depth of 1.5m alongside, is located in a small cove about 0.5 mile N of Placer.

6.56 Between Cog Point and Claver Point, about 9.5 miles SE, foul ground lies as far as 1.5 miles offshore. The NE coast of Mindanao is bold and heavily wooded as far as the valley of the Bacuag River, about 5 miles W of Claver Point. From the Bacuag River to Claver Point, the coast is low plain traversed by several small rivers and backed by wooded mountains rising about 3 miles inland.

The mountains along this stretch rise almost directly from the coast and are heavily wooded, except those near Tugas Point which are conspicuously bare of vegetation and bright red in color.

Bacuag (9° 37'N., 125° 38'E.), a village, lies about 3.5 miles SE of Placer on the S side of the mouth of the Tenanan River. A shoal spit, with a depth of 2.7m at its offshore edge, extends about 0.5 mile NE from the mouth of the Tenanan River. Puyo Rock, which is large and conspicuous, lies on the spit.

Anchorage can be taken, in 9 to 13m, mud, about 0.3 mile from the beach about 0.5 mile E of Puyo Rock.

Byby Island (9° 35'N., 125° 42'E.) is low, flat, and consists of mostly mangrove and nipa swamp in the E part. The W part is a long sandpit fronting Gigaquit village. There is a coconut grove on the island.

Cabgan Island (9° 36'N., 125° 43'E.), a grassy islet, lies about 0.5 mile off Byby Island about 2 miles E of the mouth of the Gigaquit River. A reef, usually marked by breakers, surrounds Cabgan Island.

Claver Point (9° 36'N., 125° 44'E.) projects about 0.5 mile N from the coast and forms the E side of Becebos Bay. A 5.5m shoal was reported to lie 0.75 mile NNE of Claver Point.

Hinatuan Rock (9° 41'N., 125° 46'E.), a steep-to reef with a depth of 6.4m, lies in the fairway of Hinatuan Passage, about 6 miles NNE of Claver Point.

Nagubat Island (9° 39'N., 125° 43'E.) is a small island lying in the middle of a long narrow reef in a position about 4 miles SW of Hinatuan Rock. Dijut Rock is a conspicuous rock with light vegetation on it. The rock lies on the same reef as Nagubat Island about 0.8 mile N of the latter. A 6.4m channel crosses the reef about midway between Nagubat Island and Dijut Rock.

Isa Reef (9° 39'N., 125° 41'E.), a dangerous reef with a depth of 2.1m, lies about 1.5 miles W of Nagubat Island.

Lapinigan Island (9° 35'N., 125° 46'E.), lying about 1.5 mile E of Claver Point, is covered with grass and scattered trees.

Good sheltered anchorage can be taken in Candos Bay W and S of Lapinigan Island, in depths from 11 to 18m, mud. A ship drawing 6.2m was reported to have touched bottom about 1.2 miles, bearing 342° 15' from the W summit of Lapinigan Island.

6.57 Pagbuy Rocks (9° 35'N., 125° 47'E.) consists of a group of rocks, 5 to 10m high, lying on a steep-to reef about 1 mile E of Lapinigan Island. A small drying patch lies about 0.3 mile W of Pagbuy Rocks.

Aling Islet (9° 33'N., 125° 50'E.) is about 3m high and wooded. It consists of conspicuous, white sand beaches which distinguish it from the other islets in the vicinity which have rocky shores. A drying reef extends 0.6 mile N of the islet.

Telegraph Islet (9° 33'N., 125° 51'E.), 67m high, and two other islets, lie on the coastal reef about 0.8 mile SE of Aling Island.

Lang Islets (9° 32'N., 125° 52'E.) are a group of small rocky islets from 0.5 to 1 mile from the coast of Mindanao about 1.3 miles E of Telegraph Island.

Amaga Islet (Amagat Islet) (9° 32'N., 125° 54'E.), 51m high to the tops of the trees, is in the middle of Hinatuan Passage, about 1.8 miles E of Lang Islets. It is steep-to, composed of jagged coral, and can be passed on either side.

Hinadkaban Bay (9° 31'N., 125° 54'E.) is entered between an unnamed point and **Kaba Point** (9° 30'N., 125° 54'E.), which lies about 2 miles SE. The bay recedes about 1 mile S. The shores are fringed with coral which extends as far as 0.5 mile offshore at the head of the bay. Kaba Point is bold and rocky. It is fringed by a narrow steep-to coral reef at its extremity.

The most conspicuous natural feature is the bright red color of the Red Hills about 1 mile S of the head of Hinadkaban Bay.

The Red Hills are nearly bare of vegetation and consists of bright red soil and red rock which is weathering rapidly. The hillsides are eroded, leaving deep gullies where the soil has washed into the sea.

Dahikan Bay (9° 29'N., 125° 56'E.) is entered between Kaba Point and Tugas Point, 3 miles ESE. It is divided into two arms by **Pagtigian Point** (9° 28'N., 125° 56'E.), a high, narrow, and rocky point of land 31m extending in a N direction.

The main danger in the approach is a 10.5m patch lying in a position about 1.3 miles NW of Tugas Point. The W arm of the bay extends about 2.8 miles S from the entrance, forming a narrow cul-de-sac fringed by reefs.

Rock debris from the Red Hills has formed beaches of red soil in the small coves along the shore.

Anchorage.—Anchorage, protected from all directions except from the N, can be found inside the bay in depths ranging from 31 to 46m, mud. Small vessels can also obtain anchorage in the head of the bay E of Pagtigian Point, in a depth of 31m, mud, sheltered from the Northeast Monsoon (October to March).

Tugas Point (9° 29'N., 125° 57'E.) is the NE extremity of Tugas Peninsula. The extremity of the point consists of a cliff, 24m high, backed by hills. The point is fringed by a steep-to reef about 0.3 mile wide.

From Tugas Point to Cauit Point the coast is indented by two large adjacent bays, Carrascal Bay and Lanuza Bay. The coast from the head of Carrascal Bay to the head of Lanuza Bay is a low cultivated plain. Along the SE shore of Lanuza Bay, the mountains rise steeply from the shore and are heavily wooded.

Tugas Peninsula (9° 28'N., 125° 57'E.) is a bold, wooded, irregularly-shaped peninsula. It is connected to the NE coast of Mindanao by a low narrow isthmus about 2.5 miles SSW of Tugas Point. The E side of the peninsula consists of rocky bluffs interspersed with sand beaches.

A tongue-shaped steep-to reef, which partly dries at LW, extends about 0.5 mile SW from the S end of the Tugas Peninsula and forms a sheltered cove on the N side of Carrascal Bay. The edge of the reef can be easily made out. Small vessels can round it fairly close to, and anchor in the cove NW of the reef, in 18 to 31m.

6.58 Carrascal Bay (9° 25'N., 125° 58'E.) is entered between the SE side of Tugas Peninsula and Capungan Point, about 3 miles SE. Gorda Point, 52m high, lying about 2.8 miles S of the S end of Tugas Peninsula, divides the bay into two parts.

The bay is exposed to the Northeast Monsoon, and it is reported that a heavy swell sets into the bay during most of that season. A reef extends 0.25 mile E from the point.

The NW arm of the bay is backed by the active volcano of Mount Legaspi which rises about 4 miles W. Intervening hills rise abruptly from a mangrove-bordered shore that is fringed by mud flats about 0.5 mile wide.

The SE arm of the bay is backed by a level, cultivated, coastal plain through which the Carrascal River flows.

The mouth of the river lies about 0.8 mile W of a low isthmus connecting the mainland with Capungan Peninsula. The peninsula forms the E shore of the SE arm of the bay.

Carrascal is a village located on the W bank of the Carrascal River mouth. A church bell tower on the N side of the village and a yellow building on the beach are conspicuous.

Anchorage can be taken in a position about 0.8 mile N of the church tower, in 18.3 to 22m.

During the Northeast Monsoon, heavy swells are felt at the anchorage.

General Island (9° 25'N., 126° 01'E.) lies close NE of Capungan Point, the SE entrance point of Carrascal Bay.

The NE and NW sides of the island consist of a series of bluffs which are conspicuous from E or W. The S side of the island is indented by two bays separated by a small peninsula. The E bay is of little value to shipping.

General Island Anchorage (9° 25'N., 126° 00'E.), the W bay on the S side of General Island, is fringed in places by narrow shore reefs which form a basin about 0.3 mile in diameter. A

conspicuous rock on the edge of the reef projecting from the SW end of the island marks the W entrance point of the anchorage.

The E entrance point is steep-to and consists of the S of two spurs protruding W from the peninsula on the S side of the island. Small vessels can pass midway between the entrance points and obtain sheltered anchorage, in 26m, mud, with the N spur bearing 090°.

Ramillete Rock, a 17m high, steep-to, and conspicuous rock, lies about 0.4 mile NNW of the SW end of General Island.

Auqui Island (Auquit Island) (9° 24'N., 126° 03'E.) is 102m high and lies 1.75 miles SE of General Island. The SW extremity of the island is steep-to. The other sides are fringed by reefs which extend 0.5 mile N from it.

There is foul ground between General Island and Auqui Island.

Triton Rocks lie 1.25 miles NNW of Auqui Island. The N rock is 5m high and marks the N extremity of the foul ground between General Island and Auqui Island.

6.59 **Whale Rock** (9° 29'N., 126° 04'E.), a small black rock 4m high, lies on a bank about 4.5 miles NNE of Triton Rocks. Foul ground, over which the sea breaks in moderate weather, extends as far as 0.15 mile from Whale Rock. An 8.5m patch lies about 0.4 mile SE of the rock, while a 14.6m patch lies about 0.8 miles NW of the rock.

Lanuza Bay (9° 17'N., 126° 05'E.) is entered between Capungan Point and Cauit Point, about 14.5 miles SE. The E side of the Capungan Peninsula comprises the NW shore of the bay.

The SW shore of the bay consists of a continuous dark sand beach. A cultivated plain, about 5 miles wide, backs the SW shore of the bay and is traversed by several small rivers. The SE shore of the bay is bold, with black rocky cliffs.

Cantilan (9° 20'N., 125° 59'E.) is a small town on the N bank of the Cantilan River about 0.5 mile from its mouth.

There are several warehouses and a large stone church in the town. A pilot for Hinatuan Passage is available at Cantilan.

Lanuza (9° 14'N., 126° 04'E.) is a village situated at the head of the bay on the E bank of the Lanuza River mouth. There is a stone church in the village. The village can also be identified by a hill, 168m high, lying 0.25 mile S of the village, which is the W hill in this vicinity.

Along the SE shore there are black rocky cliffs and the mountains rise steeply to form a bold heavily-wooded promontory. About 3 miles SW of Cauit Point the spur of mountains ends in a conspicuous step, 329m high.

There are short sand beaches about 1 mile SW and 1 mile NE, respectively, of the step. The N end of the promontory consists of hills terminating in Cauit Point.

Unamao Island (9° 23'N., 126° 00'E.) lies about 0.5 mile E of the SE end of the Capungan Peninsula. The island is wooded and has four conspicuous peaks.

Cantilan Shoals consists of a number of rocky patches, with a least depth of 1.2m, which are grouped in an area of foul ground that extends about 1.5 miles NE from the E end of the drying reef which fringes the mouth of the Cantilan River. Vessels should not attempt to pass inshore of Cantilan Shoals.

Anchorage can be taken, in 12.8m, mud, NNE of Cantilan in a position about 1 mile SW of Unamao Island.

Cauit Point (9° 18'N., 126° 12'E.) is the NE extremity of a wooded promontory formed by a spur of the E mountain chain of Mindanao. The point is marked by a light.

There are some rocks, 9.1m high, on the N side of the promontory, lying close offshore, from 0.5 to 1.5 miles W of Cauit Point. The E side of the point is fringed by a reef, which extends 0.6 mile offshore.

Cauit Bank (9° 20'N., 126° 16'E.), with a least charted depth of 14.6m, rock, lies from 2.75 to 4 miles NE of Cauit Point.

The Bucas Islands

6.60 The Bucas Islands consist of Bucas Grande Island, Middle Bucas Island, and East Bucas Island. Bucas Grande Island, the largest of the group, forms the E entrance of Hinatuan Passage.

Middle Bucas Island lies close to the NE side of Bucas Grande Island and is separated from it by Port Batuecas.

Mount Sibonga, a conspicuous wooded conical peak in the SE part of the island, is the highest summit of the Bucas Islands group. East Bucas Island lies close E of Middle Bucas Island and is separated from it by a boat passage.

Northward and S of Siargao Island, and E of the Bucas Islands, the depths on the coastal shelf are irregular.

Bathymetric conditions are likely to be unstable in this vicinity because of frequent and severe earthquakes. Most of the marine epicenters lie in the Philippine Deep. There is a concentration of epicenters recorded about 30 miles E of the Bucas Islands.

Banks and isolated soundings that have depths of less than 37m should be regarded with caution.

Wherever possible vessels should avoid passing over charted inequalities in soundings.

Under no circumstances should vessels navigate in this vicinity in depths less than 18.3m without taking every precaution to avoid possible dangers.

Bucas Grande Island (9° 40'N., 125° 56'E.) is indented by coves and small bays.

6.61 **Dahakit Point** (Darakit Point) (9° 34'N., 125° 56'E.), 21.3m high at its extremity, projects about 0.5 mile W from the S end of Bucas Grande Island. A narrow reef fringes its N side. The point is marked by a light.

The SW side of Bucas Grande Island, which lies about 4.5 miles off the NE coast of Mindanao and forms the NE side of the E entrance of Hinatuan Passage, is indented by two bays. A number of small, steep, and heavily wooded peaks distinguish this side of the island.

Kalunis Point (9° 35'N., 125° 54'E.), about 1.8 miles NW of Dahakit Point, is 58m high and fringed by a steep-to reef about 0.1 mile wide. An islet, 15.2m high, lies on the edge of the reef.

Between Kalunis Point and the SE entrance point of Sohutan Bay, about 1 mile NNW, the shore is fringed by a narrow steep-to reef. A small cove lying about 0.3 mile N of Kalunis Point is blocked by reefs on which there are several islets. The largest islet is 49m high.

Sohutan Bay (9° 36'N., 125° 54'E.) is about 1.3 miles wide between its SE entrance point, 57m high and Nakiauit Point, about 2.25 miles NW of Kalunis Point.

The shores of the bay are fringed by steep-to reefs. Two patches, 0.9 and 1.8m, lie about 0.5 mile SSW and ESE, respectively, from Nakiauit Point.

A steep-to reef extending about 0.5 mile NNW from the SE entrance point forms a S arm of the bay about 0.5 mile long. Several rocks lie on the reef.

The largest rock, 33m high, lies on the N edge of the reef. An island, 57m high, and an islet, 22m high, lie on a steep-to reef close W of the SE entrance point. The reef extends as far as 0.1 mile W from the islands W side.

Sohutan Inlet, which extends about 1 mile E from a break in the shore reef in the S arm of Sohutan Bay, is of no navigational importance because its entrance is blocked by a 0.4m shoal.

Good sheltered anchorage can be taken in the S arm of Sohutan Bay about 0.3 mile offshore, in 42m.

When approaching this anchorage from S, the 33m high rock should not be brought to bear less than 047°, in order to pass outside all dangers off the SE entrance point.

Nakiauit Point (9° 37'N., 125° 53'E.), the SW extremity of Bucas Grande Island, is about 61m high and conspicuous. A 4.6m shoal lies about 0.5 mile W of the point and a 4.6m patch lies about midway between. The shoals cannot be distinguished at any distance. The point should be given a berth of about 1 mile.

The W side of Bucas Grande Island is indented by a number of small bays, mostly too deep to provide anchorage. The coast is fringed by steep-to reefs.

6.62 Kanlanuk Bay (9° 39'N., 125° 55'E.), entered 3 miles NNE of Nakiauit Point, has a reef extending 0.5 mile NW from the S entrance point. There is anchorage, in a depth of 44m, 0.4 mile N of Pamosaingan village, located at the head of the bay.

Manaol Point (9° 43'N., 125° 54'E.), 6.5 miles N of Nakiauit Point, is bold and fringed by a narrow steep-to reef.

Bucas Point (9° 46'N., 125° 55'E.), the NW extremity of Bucas Grande Island, lies about 2.5 miles NNE of Manoal Point. The point is bold and is fringed by a steep-to reef about 0.2 mile wide. The N part of Bucas Grande Island consists of a sparsely-wooded, flat-topped ridge, 271m high at its summit. Dark red bluffs rise abruptly from the shore.

Dayanayog Cove (9° 45'N., 125° 57'E.), Baybagun Cover, and Soung Cove are adjacent coves with a common entrance. The N entrance point of the coves is fringed by a steep-to reef about 0.3 mile wide. A conspicuous rock, 1.2m high, lies on a reef about 0.4 mile N of the N entrance point of the coves.

There is a depth of 14.6m between the reef and the shore. Vessels should pass NE of the rock.

Port Batuecas (9° 43'N., 125° 58'E.) is a narrow inlet separating the W side of Middle Bucas Island from the E side of Bucas Grande Island. The entrance of Port Batuecas is a narrow passage, about 0.8 mile long, which leads S and E to the W side of Port Sibonga.

It is constricted by reefs on either side to a navigable channel, about 91m wide, with a controlling depth of 5.8m. The tidal currents in the channel are strong.

The S part of Port Batuecas is foul as far as 0.33 mile offshore. Drying reefs fringe most of the remaining shores of the port. At the head of the port, reefs, which dry at 0.3m, connect the NW side of Middle Bucas Island with the E side of Bucas Grande Island.

About 0.8 mile NW of the W end of the entrance channel, the reef fringing the E shore of the port projects about 0.5 mile offshore. Sheltered anchorage, in 16m, mud, can be taken about 0.3 mile S of the projecting reef.

The N part of Port Batuecas is encumbered by an 8.2m patch lying about 0.3 mile N of the projecting reef. A 1.2m reef lies about 0.2 mile farther N.

6.63 Port Sibonga (9° 41'N., 126° 00'E.) is a small bay entered S of Middle Bucas Island. The navigable width is about 0.5 mile between the 9.1m curves. Banluto Islet, 58m high, rocky and wooded, lies in the middle of the bay.

The islet is surrounded by a reef which extends N to Middle Bucas Island, dividing the bay into two separate basins.

Anchorage can be taken in the E basin off the town of Consolacion, in 13 to 15m. Vessels over 5.5m draft should not use this anchorage. Vessels having a draft of 4.5 to 5.5m should proceed with utmost caution as the bottom is of coral and is very uneven. It is reported that the best anchorage is located between the E entrance point and Banluto Islet.

The E side of Bucas Grande Islet trends about 7 miles SSW from Port Sibonga to Dahakit Point and consists of bold rocky promontories interspersed with sandy beaches.

The summit of the island, 282m high, rises about 2.5 miles NE of Dahakit Point. A prominent white scar is located about 1.5 miles ENE of Dahikit Point. This scar was reported to be more prominent than the charted white scar to the NE.

Socorro (9° 37'N., 125° 58'E.) is a village located on the S side of the Socorro River mouth in a position about 4 miles NNE of Dahakit Point. A sandy beach, about 2 miles long and fringed by a reef about 0.3 mile wide, fronts the village.

Middle Bucas Island (9° 43'N., 125° 59'E.) is separated from Bucas Grande Island by Port Batuecos. Mount Sibonga, 291m high, a wooded, conical peak in the SE part of the island, is the highest point of Bucas Island, and is a prominent landmark.

6.64 Bagum Island (9° 44'N., 125° 59'E.), a conspicuous islet 18.3m high, lies on a reef in a position about 0.1 mile N of the N extremity of Middle Bucas Island.

East Bucas Island (9° 43'N., 126° 02'E.) is separated from the E side of Middle Bucas Island by a narrow, drying boat channel.

The island is 183m high and well wooded. Its coasts are fringed by reefs which extend up to 1 mile offshore, on which there are several rocks and islets.

San Miguel Point (9° 44'N., 126° 02'E.), 44m high, is the N extremity of East Bucas Island and the S entrance point of the W entrance of Dapa Channel. Reefs and foul ground extend as far as 0.15 mile N from the point.

The village of San Miguel is located on the sandy extremity of the point. It can be identified by the metal roofs of the houses.

Casulian Island (9° 42'N., 126° 05'E.), lying 0.75 mile SE of the SE extremity of East Bucas Island, is wooded in the E part, where it is 90m high. The W part is lower and is covered with coconut trees. There is a narrow, deep channel between Carulian Island and East Bucas Island.

Lajanosa Island (9°38'N., 126°10'E.), Mamon Island (Manon Island), and Antokon Island (Antokan Island) lie on the same reef, about 6 miles SE of Casulian Island.

Lajanosa Island, the northernmost island, has three hills on its W side. Mamon Island, the middle island, is 82m high.

Antokon Island, about 1 mile S of Lajanosa Island, has three cones on it.

Anajauan Island (Anajawan Island) (9°37'N., 126°08'E.), lies 1.5 miles W of Mamon Island. It lies on the SW part of a bank, on which there are a number of below-water rocks and shoals, with thesouthernmost lying about 0.6 mile SSE of the SW extremity of the island.

A 2.7m patch lies 0.5 mile SE of the NE extremity of the island, while a 3m patch lies 1.75 miles NE of the same point.

Dapa Channel

6.65 **Dapa Channel** (9°46'N., 125°58'E.) separates the N side of East Bucas Island from the S side of Siargao Island. The W entrance of the channel lies between San Miguel Point and Cambasac Point, about 0.5 mile NNE.

Immediately W of the W entrance points, Dapa Channel opens to a width of about 1.5 miles, between the reefs fringing the N shore of East Bucas Island and the reefs fringing the S shore of Siargao Island.

The E entrance lies between Inayauan Point and the S side of Siargao Island. Inayauan Point is the NE extremity of East Bucas Island. Reefs and foul ground fringe the point as far as 0.5 mile N and about 1 mile E and SE.

Dapa Channel is encumbered with a number of islets and reefs. Three narrow passages lead through the reefs, the edges of which are easily made out in good light.

Dapa Channel can be negotiated by small vessels with sufficient power to overcome the strong tidal currents.

The controlling depth of Dapa Channel is 9.6m.

Vessels coming from W usually favor the NE side of Dapa Channel in order to avoid **Quico Reef** (9°45'N., 125°59'E.)and Barrabas Reef about 0.8 mile SE. They then enter the middle passage between Abanay Islet and Bancuyo Islet.

The tidal currents run with considerable velocity in Dapa Channel and in the channels leading to Numancia, Port Batuecas, and San Benito.

During both monsoons the wind abates about sunset and freshens about sunrise. This area is most frequently struck by typhoons during November.

6.66 **Bancuyo Islet** (9°44'N., 126°03'E.) lies about 1 mile E of San Miguel Point. It is a good mark in the approach to Dapa Channel from W. The S passage lies between Bancuyo Islet and the reefs and foul ground that fringe the N side of East Bucas Island. The passage is narrow and intricate and is not recommended.

Abanay Islet (9°45'N.,126°02'E.)lies with its SW extremity about 0.2 mile E of Cambasac Point. Reefs fringe the SW and N sides of the island. Dapa Reef extends about 1.3 miles E from the E side of Abanay Islet.

A 7.3m patch lies about 0.3 mile farther E. The middle passage is the recommended channel. It leads fairly straight between Abanay Islet and Bancuyo Islet and has a least depth of 12.8m. The navigable width is about 91m.

The N passage is used by small inter-island vessels and lighters. It is marked by beacons and leads W and N of Abanay Islet and then N of Dapa Reef. It is a very constricted and intricate channel, and has depths of 7 to 12m as far as the town of Dapa.

In the passage SE of the town the controlling depth is 6.4m. A 2.7m patch, marked by a beacon, lies about 1 mile SE of the town.

The channel W of Abanay Islet is not recommended to those who are not familiar with the area due to the narrow passage and the swift current.

Dapa (9°45'N.,126°02'E.)(World Port Index No. 59320) is a small town standing on the N shore of Dapa Channel. There is a stone causeway with a concrete pier extension. The offshore end of the pier had depths of 4.2 to 5.2m at its S to NW corners and 5.8 to 6.1m about 25 feet off its end.

Vessels of more than 240 tons calling at Dapa usually anchor about 1.6 miles ESE of the town, in 14.6m, mud.

Siargao Island

6.67 The S side of Siargao Island trends about 3.5 miles E from the town of Dapa to **Dolores Point** (9°45'N., 126°07'E.), which is low and covered with coconut palms.

The controlling depth in the fairway of the E approach to Dapa Channel is 10m. A 6.4m shoal patch is on the E side of the fairway about 0.8 mile S of Dolores Point.

The SE side of Siargao Island between Dolores Point and Tuason Point, about 5 miles to the NE, is a smooth sandy beach with groves of coconut, hemp, and bananas.

The village of Union is about 0.5 mile N of Dolores Point at the mouth of the Union River.

The village of General Luna is on the shore about 3.25 miles NE of Dolores Point.

The SE shore of Siargao Island is fronted by an area of foul ground studded with reefs extending as far as 4 miles offshore. A drying barrier reef, marked by breakers, is on the edge of the foul ground. A dangerous, detached dark coral reef, 6m deep, is about 2.5 miles SSE of Dolores Point.

Daco Islet (9°45'N.,126°10'E.),on the SE end of the barrier reef about 2.5 miles ESE of Dolores Point, is a good landmark. The island is 40m high on its E end, 32m high on its W end, and appears flat on top. The islet is fringed on its SE and SW sides by a reef extending as much as 1 mile offshore.

Guyang Islet, small, sandy, and covered with coconut palms, is about 1.3 miles N of the E end of Daco Islet.

Seco Reef, a drying reef with a small sand cay at its NW side, is about 1 mile SE of Dolores Point.

6.68 **Tuason Point** (9°49'N.,126°10'E.),the E extremity of Siargao Island, is a very rocky point 40m high. It has an 18.3m bluff at its face. The point is fringed by a narrow steep-to reef.

Between Tuason Point and Sharp Point, 2.5 miles to the NW, the shore is fringed by drying reefs extending as far as 1.5 miles offshore. Three large rocks are on the outer edge of the reef; the highest, 15.2m high, is about 1.3 miles N of Tuason Point.

About 0.5 mile NW of this rock there is a break in the reef about 0.4 mile wide. This is the entrance to a recess in the reef about 0.8 mile wide with depths of 9 to 26m.

Each side of the entrance is marked by a rock 7.6m high.

Sharp Point (9°51'N., 126°08'E.) is low and covered with coconut palms. The fringing reef extends 1 mile E and about 0.3 mile N of the point.

A mangrove-covered islet, 3.1m high, about 0.3 mile NNE of the point.

Between Sharp Point and Isda Island, about 1.8 miles to the WNW, a drying reef extends up to 0.5 mile offshore.

A recess in the reef, about 0.8 mile wide and with depths of 11 to 27m is formed SE of Isda Island. A drying patch is in the entrance about 0.5 mile ESE of Isda Island.

Isda Island, 37m high with several large rocks adjacent, stands on the edge of the shore reef and marks the S side of the entrance to Port Pilar.

Port Pilar (9°52'N., 126°07'E.) entered between Isda Island and Pilar Point, about 0.66 mile to the N, indents the coast about 1 mile W. The depths vary from 145m in the entrance, to 12.8m near the head of the bay.

Although the bay does not afford good shelter and is not recommended, it is the best anchorage on the E side of Siargao Island. Even during the Southwest Monsoon a heavy swell runs in around Pilar Point. The S part of the bay is filled with a drying reef extending as much as 0.25 mile offshore.

The N shore of the bay is steep-to. The Pilar River discharges into the head of the bay. Drying reefs extend about 0.2 mile from the head of the bay. An 8.2 and a 9.1m shoal are about 0.3 mile offshore at the head of the bay. Pilar Village is on the NE side of the Pilar River mouth.

Anchorage can be taken, in 12.8m or 14.6m, about 0.5 mile ESE of the village. Small vessels with local knowledge can enter the Pilar River NE of a 0.4m shoal encumbering the river mouth and proceed to a sheltered anchorage about 0.1 mile above the village. The controlling depth in the channel is 6.4m.

6.69 Pilar Point (9°52'N., 126°07'E.) is identified by a conspicuous, column-shaped rock about 0.2 mile off the point. Between Pilar Point and Sugbuhan Point, about 12 miles NNW, the coast is bold and has a regular coastline fringed by steep-to reefs from 0.25 to 0.5 mile wide. The edges of the reef are easily identified and are marked by breakers even during the Southwest Monsoon.

There are no salient points along this stretch of coast; the most conspicuous landmark is a 183m ridge at **Arena Point** (9°58'N., 126°06'E.), which is a slight projection of the shore about 6 miles NNW of Pilar Point.

Sugbuhan Point (10°04'N., 126°04'E.), the N extremity of Siargao Island, is low and covered with trees and bushes. The point is fringed by a drying reef extending as much as 0.65 mile offshore.

Sugbuhan Reef (10°06'N., 126°02'E.) is about 2.5 miles NNW of Sugbuhan Point and has a depth of 2.7m.

Tide rips occur on the reef and it can be identified with good light. The reef is about 1 mile long and is on a bank about 1.5 miles long, with a depth of 12.8 to 18.3m. A 14.6m bank is about 1.5 miles NNW of Sugbuhan Point.

The NW side of Siargao Island trends about 15.5 miles SSW from Sugbuhan Point to Venus Point and is fronted by reefs, islands, and dangers extending as far as 6 miles offshore. Only small vessels with local knowledge should attempt the intricate channels among the reefs.

Other islands and dangers which are further offshore are described in paragraph 6.53 under Dinagat Sound.

Between Sugbuhan Point and the village of Sapao, about 3 miles SSW, the shore is fringed by drying reefs extending 1.25 miles offshore.

The village of **Sapao** (10°01'N., 126°02'E.) is at the head of a mangrove-bordered cove. There is a passage through the reef abreast of the village and small vessels with local knowledge can anchor off the break, in 12.8m, about 1 mile W of the village. A 4.9m patch is about 0.3 mile further W.

Between Sapao and the village of San Benito, 4 miles to the SW, detached reefs extend as far as 6 miles offshore.

Drying reefs and foul ground extend about 2 miles offshore. Several low islets are on the reefs.

Kambiling Islet (Cabiling Islet) (10°01'N., 126°00'E.), about 2 miles W of Sapao, is a small sand cay, awash at HW and fringed by a narrow steep-to reef. A 6.7m shoal patch is about 0.5 mile SW of the islet. Vessels can pass N of the islet in 26m or SW of the islet in 11.9m.

Malayo Reef (10°02'N., 125°56'E.), lying about 3.75 miles WNW of Kambiling Islet, has a least charted depth of 2.7m. Three charted reefs, with least charted depths between 3.2 to 5.8m, lie between Kambiling Islet and Malayo Reef.

Pagbasayan Islet (10°00'N., 126°01'E.), a low, sandy islet covered with trees and bushes, is on the S side of a large drying reef and 1.5 miles SSE of Kambiling Islet.

6.70 San Benito (9°57'N., 126°00'E.) is a small village lying about 2 miles S of Pagbasayan Islet. Litalit Island lies 1.25 miles SW of San Benito.

Dahican Islet (9°57'N., 125°57'E.), on an extensive drying reef about 2 miles W of San Benito, is a flat mangrove-covered island with a small wooded area in its middle part.

Kangun Islet (9°58'N., 125°59'E.) is a low sandy islet about 3 miles SSW of Kambiling and close NE of Dahican Islet. A drying reef extends 1 mile NNE of Kangun Islet.

Litalit Bay (9°58'N., 126°00'E.) is formed E of Dahican Islet and Kangun Islet. The bay is encumbered by foul ground. Only small vessels with local knowledge can navigate the constricted channels N and S of Kangun Islet, and they can anchor about 0.8 mile NW of San Benito, in 10.5m, coral. Litalit Island is 1.25 miles SW of San Benito.

Sayung Channel, connecting the head of Litalit Bay with Baban Lagoon, is a mangrove-fringed channel navigable only by small craft and leads S to Numancia.

San Benito is fronted by a sand beach and is visible from seaward.

Between San Benito and Venus Point, about 8 miles SSW, the W part of Siargao Island is a wide mangrove flat, intersected with numerous streams and small-boat channels forming large mangrove-bordered islands fronting the shore.

Poneas Island (9°54'N., 125°57'E.), the largest island fronting Siargoa Island, has a summit 200m high, and from seaward appears as numerous peaks separated by deep ravines.

The drying reef fringing Dahican Island extends about 2.25 miles SW as far as Megancub Island and fringes the NW side of Poneas Island as far as 1.25 miles offshore.

Foul ground is 1 mile farther offshore and nearly fills the area W and NW of Megancub Island, and that is encompassed

between the SW side of Poneas Island and the E sides of Cowhagan Island and Kangbanyo Island.

Laonan Island (9° 53'N., 125° 55'E.), 138m high, is a small wooded island close to the SW end of Poneas Island.

Kangbanyo Island (Kangbangio Island) (9° 55'N., 125° 54'E.), 134m high, is 0.5 mile NNW of the N part of Laonan Island and consists of numerous wooded peaks.

Cowhagan Island, which is low, lies on a reef extending NW from Kangbanyo Island. A rock, 19m high and wooded, lies close N of Cowhagan Island.

Tona Island (9° 52'N., 125° 57'E.), a large mangrove island, is close SE of Poneas Island and is separated from it by a narrow small-boat channel. Narrow boat channels also separate the NE and SE sides of Tona Island from the W part of Siargao Island.

6.71 Numancia (9° 52'N., 125° 58'E.) (World Port Index No. 59330) is about 2.5 miles NNE of Venus Point.

The only part of the town visible from seaward is the conspicuous church tower. A 183m stone pier is at the town. Currents are strong and there are dangerous whirlpools, but it is reported that small vessels with 2.4m draft and with local knowledge, can reach the town at HW and anchor off the pier.

The SW side of Siargao Island from Venus Point to Cambasac Point, about 7.5 miles to the SW, is rocky and bordered with mangroves. A steep-to reef less than 0.5 mile wide fringes the shore.

Pamay Point (9° 50'N., 125° 57'E.), a low, mangrove-covered point, is about 0.8 mile SE of Venus Point. A fringing reef extends about 0.4 mile W of the point.

Pamay Bay (9° 49'N., 125° 58'E.), a recess in the coast about 0.8 mile wide, is formed by the S side of Pamay Point. The Lumaton River discharges into the head of the bay.

The summit of Siargao Island, 275m high, rises 3 miles E of the bay. A green hill, visible from seaward, is on the N side of the Lumaton River and marks the deserted village of San Fernando.

Vessels can anchor in Pamay Bay, in 28m, mud, about 0.5 mile S of Pamay Point with the town bearing 060°.

Samar—West Coast and Off-lying Islands

6.72 Libucan Islands (11° 54'N., 124° 39'E.), a group of three small islands and several islets and rocks, lie about 3.25 miles off the coast of Samar. Each of them is very steep-to and has depths of more than 18.3m, less than 0.25 mile off.

Good anchorage can be taken, in 22 to 26m, mud, in a bay on the N side of Libucan Daco Island, the largest of the group. Vessels on the coast take shelter here during SW gales.

Dapdap Rocks (11° 52'N., 124° 40'E.), a steep-to rocky pinnacle that is partly awash, lies about in the middle of the deep channel between the Libucan Islands and the Canahauan Islands.

Canahauan Islands (11° 49'N., 124° 42'E.), a group of several islands, islets, and rocks, lie about 3.25 miles off the coast of Samar about 3 to 8 miles SSE of Libucan Daco Island.

Port Aguirre (11° 49'N., 124° 42'E.), a sheltered anchorage, occupies a bight formed by the SE side of Canahauan Daco Island and the NE side of Timpasan Island. It affords good refuge during typhoons, and vessels anchored off Calbayog or Catbalogan frequently take shelter here.

Large vessels can anchor, in 27 to 29m, mud, NNW of Batgangon Island. Small vessels can anchor, in 16 to 20m W of the latter island, or in a confined inner basin entered through a narrow channel that passes S and W of two islets at the W end of the port.

Vessels can enter the port through the wider passages between the islands and islets to the E and SE. In approaching from N it is advisable to pass E of Canmamot Island to avoid the rocks W of it.

The approach from SE is about 0.8 mile wide between Bolo Rock and Boloang Island, but a 7.6m depth lies almost in mid-channel.

6.73 Maglagabon Point (12° 18'N., 124° 21'E.), about 30 to 61m high, is steep-to, clear of dangers, and has depths of 37m less than 0.25 mile offshore. It is closely backed by hills that rise abruptly from the coast so that the point may not be very conspicuous. A village is situated at the head of a small bight on the S side of the point.

Between Maglagabon Point and Jibatan Point, about 16 miles SE, the steep-to coast rises abruptly from the sea to hills that attain heights of 122 to 274m about 0.3 mile inland. Mountains, up to 707m high, back the coastal hills.

Parts of the coast are rocky, with cliffs in some places, but there are a few short sandy beaches. Toward the S end of this section of coast, the hills are lower and recede inland in the vicinity of Jibatan Point.

Tungoo Point (12° 10'N., 124° 25'E.), a low point that extends about 0.3 mile from the coast, has a hill, 51m high, on its outer end. It is steep-to, but several rocks, close off a short coastal reef, lie about 0.5 mile offshore about 0.5 mile SE of the point. A small village is situated on the coast about 0.5 mile E of the point.

From Tungoo Point the coast trends about 7.5 miles SE to Jibatan Point. Although the narrow reefs and shore banks fringing parts of this section of the coast are steep-to, several islets and rocks lie up to about 0.5 mile offshore.

Binalio Point (12° 08'N., 124° 27'E.), about 30m high, lies about 2.5 miles SE of Tungoo Point. Binalio Islet, 35m high, lies 0.4 mile SW of the point.

Damita Rock (12° 06'N., 124° 28'E.) lies about 0.5 mile offshore about 4 miles SE of Binalio Point. The rock is steep-to, but there are depths of less than 6m between it and the coast.

Jibatan Point (12° 05'N., 124° 31'E.) has a hill 81m on it. The coast in this vicinity is low. It is clear of dangers, but a steep-to shore bank extends about 1 mile offshore SW and S of the mouth of the Jibatan River, about 1.5 miles ESE of Jibatan Point. Depths of less than 1.8m lie just inside the 20m curve on the outer edge of this shore bank. The land is low and marshy at the mouth of the river.

6.74 Calbayog (12° 04'N., 124° 36'E.), a town, is situated on the E side of the mouth of the Calbayog River. It is one of the principal ports for the export of copra and hemp.

The port is an open roadstead, and cargo is lightered to vessels anchored off the town. Small vessels moor alongside

the inner end of the E jetty. A bridge crosses the river, some distance from the entrance.

A light is shown from a concrete tower, 10m high, at Calbayog.

A church in the town has a conspicuous red dome. The mouth of the river is confined by two parallel jetties, less than 91m apart, that extend about 0.3 mile S from the shore. There is a controlling depth of 1.2m in the entrance channel between the jetties. Boats and lighters navigate this channel to a number of small wharves at the town.

Anchorage.—The best anchorage is in 12.8m, about 1 mile S of the light at the river mouth. Large vessels should not go closer in as the depths are irregular and shoal rapidly in places. This open roadstead is somewhat sheltered from the Northeast Monsoon, but it is open to the Southwest Monsoon.

Vessels on this part of the coast can take anchorage, sheltered from S and SW weather, in a bay on the N side of Libucan Daco Island, about 10 miles SSE of Calbayog.

Supplies are very limited at Calbayog. A number of small powered lighters are available. There are a few warehouses of limited capacity. Inter-island vessels call regularly from Manila and Cebu.

There is a post and telegraph office, and the town is connected by highway with Catbalogan and the other important towns on Samar.

The Calbayog hospital offers limited medical facilities, but has a 50 bed capacity.

6.75 Santa Margarita (12°02'N., 124°40'E.) is a small town situated on the coast about 4.5 miles ESE of Calbayog. The low intervening coast is fronted by a sandy beach, and is clear of known dangers.

The **Gandara River** (11°58'N., 124°43'E.), the largest and most important river on the W coast of Samar, empties through a delta into the sea about 8 miles SE of Calbayog. Small craft, less than 27m long and 1.8m in draft, can navigate the river at HW to the town of Gandara, about 7 miles inland. The currents in the river are usually weak.

There is a depth of 3m alongside a landing at Pagsanjan, a village situated about 1.8 miles upstream at the junction of the N and S entrances.

The N and deepest entrance of the Gandara River lies about 8 miles SE of Calbayog. It has a least depth of 0.9m at LW, and there are depths of about 3.7 to 9.1m inside the bar.

A light is shown from a concrete tower, 9m high, on the N extremity of Caprangasan Island, situated on the S side of the entrance to the Gandara River.

Between **Tarangnan Point** (11°54'N., 124°44'E.), a prominent headland, and Madalonot Point, about 14 miles SE, the coast is rugged and hills rise abruptly from the sea to heights of about 91 to 244m. Mountains, over 457m high, back the coastal hills in the vicinity of Catbalogan.

Numerous bays and bights, most of which are small and shallow, indent this part of the coast. Although much of this coast is high and cliffy in places, the heads of the bays and bights are low.

Cambatutay Bay (11°53'N., 124°45'E.), the largest of the above mentioned bays, indents the coast about 3 miles NE between Tarangnan Point and Mangcares Point, a low point about 3 miles SE. Except for a number of rocks and islets, depths in the bay shoal fairly regularly. Several steep-to rocks lie about 0.5 mile W of Mangcares Point.

Silanga Bay (11°49'N., 124°51'E.) occupies a bight that recedes about 1.3 miles NNE between the steep-to SE side of Buri Island and Anas Point, about 1.3 miles SE.

The bay is clear of dangers.

Excellent anchorage, sheltered from all but S winds, can be taken in the bay, in 5 to 9m, mud.

Jesus Point (11°47'N., 124°52'E.), on the N side of Catbalogan Harbor, lies about 1 mile SE of Anas Point at the S end of a rather steep-to headland that rises abruptly from the sea to several hills, 58 to 71m high.

A number of islets and reefs lie up to about 1.5 miles offshore in the approaches to Catbalogan between Jesus Point and Cujao Point, about 2 miles SSE.

6.76 Catbalogan (11°46'N., 124°53'E.) (World Port Index No. 58670), the capital of Samar Province, lies about 0.8 mile SE of Jesus Point at the head of a small bight. The port consists of an open roadstead between the coast and several reefs and islets about 1 mile offshore.

Large vessels anchor in the harbor, and their cargo is handled by lighters. Smaller inter-island vessels go alongside a pier at the town.

The town of Catbalogan is situated on a very short narrow coastal plain, on low ground that is sometimes partly flooded during heavy rains but which drains off rapidly. It is confined by hills rising abruptly to heights of more than 152m.

The Catbalogan River, navigable only by boats, empties into the head of the harbor at the N end of the town.

A light is shown from a concrete tower, 7m high, standing on the N side of the entrance to the Catbaloga River, and the buildings at the town are conspicuous from offshore. The light was recently reported extinguished.

Depths—Limitations.—Quinutay Reef, a small drying reef, lies at the outer end of a narrow, sandy shore bank that extends about 0.8 mile W from the coast. A buoy is moored off the NW end of Quinutay Reef. Depths in the harbor shoal regularly from about 8.2m at the entrance to the 5.5m curve, which lies about 0.3 mile offshore.

Between Quinutay Reef and **Cujao Point** (11°45'N., 124°53'E.)several shoal patches, contained just inside the 5.5m curve, lie up to about 0.3 mile offshore.

A detached 2.7m patch lies about 0.5 mile offshore about 0.5 mile S of Quinutay Reef.

A causeway extends about 260m SW of the town. It terminates in a 140m long concrete pier, with depths of 2.1 to 4.6m alongside its fendered piles. Several inter-island vessels can be accommodated at one time.

Anchorage.—Vessels can anchor, in 8.2m, mud, about 0.8 mile offshore with the light at the mouth of the Catbalogan River bearing 063°, or they may anchor anywhere W of the town depending on draft. Sheltered anchorage can be taken in Silanga Bay, about 2 miles NW of Catbalogan, or in Zumarraga Channel, about 7 miles SW of the harbor.

Directions.—Either North Channel or South Channel may be used in entering Catbalogan, but the latter is preferred. In approaching South Channel steer to a position about 2.5 miles S of Buri Island, and before the larger of the Cagdullon Islands bears W of 316°, bring the light at Catbalogan to bear 063°.

Steer for the light on the latter course through South Channel into Catbalogan Harbor. The harbor can also be entered S through Darajuay Channel, which lies between the Darajuay Islands and the coast.

Vessels entering this channel steer to pass about 0.3 mile S and E around the Darajuay Islands, and then steer a course of 322°. When the light at Catbalogan bears 052°, steer for it into the harbor.

Caution.—The remains of a breakwater, with a depth of 1.2m, lie 0.1 mile S of the causeway. An obstruction, awash at LW, lies 0.15 mile N of the pierhead.

6.77 Madalonot Point (11°45'N., 124°54'E.) is a promontory that lies about 1.5 miles ESE of Cujao Point. Maqueda Bay and Villareal Bay form an extensive bight that lies between Madalonot Point and Guintarcan Island, about 7.75 miles S. Maqueda Bay is one of the best known fishing grounds in the Philippines.

Extensive muddy shore banks, that dry at LW, lie at the heads of these bays. The low mangrove shore is backed several miles inland by low hills and a few mountains.

Wright, a small town accessible only by small craft, lies at the head of Maqueda Bay, and there are a number of villages on the shores of both bays.

The **Calbiga River** (11°40'N., 124°58'E.), with a depth of about 0.6m over the bar and navigable only by boats, empties on the S side of a low point that lies about 6 miles SE of Madalonot Point and separates the two bays.

Buad Island (11°40'N., 124°51'E.), about 4.5 miles long and nearly as wide, lies in the approach to Maqueda and Villareal Bays about 3.75 miles SW of Madalonot Point. The island is mountainous. It is indented by numerous small bights and there are many islets close to shore.

A 3.7m rocky patch lies about 0.3 mile N of the NE end of the island. A small, detached drying reef lies about 0.5 mile N of the middle of the N side of Buad Island, and another small reef lies about 0.3 mile off the SW end of the island.

Several islets lie just outside the 5.5m curve about 0.3 mile off the S end of Buad Island.

A number of islets lie up to about 1 mile off the middle of the E side of the island and are contained just inside the 5.5m curve.

The small town of Zumarraga is situated on the SW end of Buad Island. A concrete pier, the outer end of which is in ruins, extends about 137m NW into the harbor from the town and has depths of 3.6m at its outer end decreasing to 2.1m near the shore.

Small coastal vessels, which call regularly, moor to either side of the pier. The town has a post office and radio communications. The small harbor in front of the town affords sheltered anchorage for large vessels, in about 8.5m, mud. Deep draft vessels should approach only from N.

6.78 Zumarraga Channel (11°38'N., 124°50'E.) separates Buad Island from Daram Island. It trends about 7 miles SE and joins the S end of Buad Channel in the NE approach to Daram Channel. There are two 12.8m rocky patches in the middle of the N part of the channel, but otherwise depths shoal regularly from 29m in the N entrance to 7.3m in the S end southward of Buad Island, with a least depth of 10.4m.

Anchorage.—Sheltered anchorage can be taken in Zumarraga Channel, in about 9 to 15m, mud. Although protected from the monsoons, strong winds sometimes cause rough water.

Buad Channel is usually taken by coastal vessels bound from Catbalogan to Daram Channel. It has a least depth of about 5.9m, and its narrowest part is about 0.5 mile wide between a 0.9m patch off the N end of Guintarcan Island and the SE end of Buad Island.

Basiao Islands (11°42'N., 124°54'E.), up to 58m high, are three small islets. A narrow shoal, with depths of less than 5.5m, extends about 0.5 mile NW from the middle islet, and a reef extends about 0.1 mile W from the S islet; otherwise, these islets are steep-to. There are conspicuous white cliffs, 9 to 24m high, on the E sides of the N and middle islets.

Daram Island (11°36'N., 124°48'E.), mountainous and rugged, is separated from the coast SE by the narrow Daram Channel described below. The island appears as a high peninsula. Hills and mountains rise abruptly from the sea to heights of about 122 to 383m.

The island is mostly steep-to, and except for the shores adjacent to the SE part of Zumarraga Channel and the NE approach to Daram Channel, there are depths of more than 11m about 0.3 mile or less offshore.

Numerous high islets and a comparatively few above and below-water rocks fringe the island up to about 0.5 mile offshore.

The larger of the many bays and bights indenting the island afford good sheltered anchorage depending on the season.

There are a number of villages at which small craft call regularly from Catbalogan and Tacloban.

6.79 Parasan Island (11°43'N., 124°46'E.) lies so close to the E side of the N end of Daram Island that it appears as part of the latter, being separated by a channel less than 91m wide and about 3.6m deep.

The island is steep-to and has depths of more than 18m close offshore. A detached steep-to islet lies about 0.5 mile NE of the NE end of Parasan Island, and a 0.9m patch lies about 0.3 mile off the middle of the W side of the island.

Parasan Harbor occupies a small bight on the S side of the island off the village of Parasan. It is entered from E through the N end of Zumarraga Channel.

Parasan Harbor affords sheltered anchorage, in 18 to 27m, mud, 0.2 mile SE of Parasan town. This anchorage can be approached from E through Zumurraga Channel.

Dulugdug Point (11°31'N., 124°49'E.), the W entrance point of the S end of Daram Channel, is the NW end of the high headland between Laguinit Bay and Janabatas Channel. The point shows prominently from SW as a rounded knob.

Daram Channel (11°32'N., 124°50'E.), separating the S end of Daram Island from Samar, joins the S ends of Zumarraga and Buad Channels. It is used by coastal and inter-island vessels.

The channel, which has a least width of about 0.3 mile, has depths of about 9 to 27m in the SW part, but there are depths of 5.5m in the fairway over the shore bank that extends across the NE entrance from Guintarcan Island.

The Aocon Islets lie close together in the middle of the NE end of the channel and have fairly deep water on either side.

Except for the latter islets and several others on each side of the NE entrance, the fairway of the channel is clear. In the vicinity of Talalora, the deeper water is on the NW side of the channel, but otherwise the fairway lies in mid-channel and is easy to negotiate.

Tides—Currents.—The tidal currents in Daram Channel set NE on the flood and SW on the ebb. They are reported to attain a velocity of 1 to 1.5 knots, the ebb having greater strength than the flood.

6.80 Talalora (11˚32'N., 124˚50'E.)(World Port Index No. 58660) is a village on the Samar shore of Daram Channel.

A causeway extends about 46m NW from the town. The small wharf at the end of the causeway has a depth of about 3.3m alongside.

There is a small cargo shed at the town. Coastal vessels call regularly.

Between Dulugdug Point and Diutay Point, about 2.5 miles S, the coast is indented by several small bights and presents a very high rugged aspect.

There are some narrow sandy beaches, but high hills rise steeply from the shore and attain a height of 363m about 1.5 miles inland.

Janabatas Channel and San Juanico Strait

6.81 Janabatas Channel (11˚27'N., 124˚50'E.), the W approach to San Juanico Strait, is entered from westward between Diutay Point and Baluarte Point, about 2.8 miles SSW.

The narrow passage formed by Janabatas Channel and San Juanico Strait separates the SW end of Samar from the NE end of Leyte and connects the Samar Sea with Leyte Gulf.

It is used by inter-island vessels, but transit of the passage is restricted by shoal water and dangers to vessels of not more than 107m in length and 5.5m in draft. The greatest draft that has been taken through is 5.2m.

Tides—Currents.—In Janabatas Channel the tidal currents set W on the flood and E on the ebb at a velocity of about 1 to 2 knots. A velocity of as much as 2.5 knots may be experienced.

In San Juanico Strait the tidal currents set N on the flood and S on the ebb at an average velocity of about 1.5 knots off Uban Point and about 2 knots off the E side of Nababuy Island, however velocities of as much as 3 and 3.75 knots, respectively, may be encountered at those places.

The tidal current may attain a velocity of 4 to 5 knots in some parts of the strait and is reported to cause violent rips and eddies.

The tide shows considerable inequality in San Juanico Strait. In the N part of the strait, N of Uban Point, this inequality occurs in both HW and LW, but in the S part of the strait it is mainly in the HW.

Depths—Limitations.—The depths in the fairway of Janabatas Channel vary from a swept depth of 5.8m in Samputan Pass to more than 26m. The 10m curve lies somewhat across the W entrance of the channel from Diutay Point to Baluarte Point, and immediately within it depths decrease to about 7.3 to 8.2m in the middle, and 6.4m on the S side of the fairway.

Although there are general depths of about 9 to 27m in San Juanico Strait, there are numerous 5.5 to 7.3m patches of less than 2.7m.

Baluarte Point (11˚26'N., 124˚49'E.), the S entrance point of Janabatas Channel, rises to a 143m summit about 0.5 mile SE. The coast in the vicinity rises abruptly to heights of more than 305m about 0.5 mile inland, and attains an elevation of 558m in the summit of Mount Busay, which lies about 2 miles SE of the point and is a prominent mark to steer for in making the channel entrance.

Calaguan Island is an islet that lies about 0.3 mile NE of Baluarte Point and is connected by a partly drying reef. The point is steep-to and clear of dangers, with depths of more than 11m less than 0.25 mile offshore. A small foul area lies about 0.5 mile NNE of Calaguan Island. Some stakes are located about 0.3 mile farther N.

Janabatas Channel trends about 8 miles E to the N entrance of San Juanico Strait. The shore on both sides is very irregular, indented by numerous shallow bays into which small streams discharge.

Much of the shore is low and in some places swampy, but there are many hills that rise abruptly from the shore.

Several small towns and a number of villages lie on both sides of the channel.

The N side of Janabatas Channel trends about 3 miles E from Malagining Point, about 0.8 mile SE of Diutay Point, to Tinigrapo Point, close SE of which lies an islet, 23m high.

A shore bank, defined by the 5.5m curve, extends about 0.3 mile offshore between Malagining Point and the village of Igangigang about 1.3 miles E, but it extends about 1 mile offshore from the head of a bight between the latter village and Tinigrapo Point. Some pilings stand near the S edge of this bank.

Between Tinigrapo Point and Santa Rita, about 3 miles ESE, an extensive shore bank, with depths of less than 2m and defined by the 5.5m curve, extends S from the N shore to within a little less than 0.25 mile of the S side of the channel.

6.82 Dabun Island (11˚27'N., 124˚54'E.) is an islet that lies on the W part of the above shore bank in a position about 1 mile SE of Tinigrapo Point. A rocky 2.3m patch, on the W extremity of the above shore bank, lies about 0.8 mile W of Dabun Island and nearly that distance S of Tinigrapo Point.

An obstruction is charted on the N side of the channel a little more than 0.5 mile WSW of the W extremity of Dabun Island. The tidal currents apparently meet in this vicinity. The fairway of the channel lies S of this rocky patch.

Santa Rita (11˚27'N., 124˚56'E.), a small town on the N shore of the E end of Janabatas Channel, is very conspicuous from most parts of the channel. The shore bank extends about 0.3 mile offshore in front of the town, and encumbers a bight SE.

There are depths of about 4.9m alongside the S end of a pier at Santa Rita. Small craft call regularly from Catbalogan and Tacloban. There is a post office and the town has radio communication.

The S side of Janabatas Channel trends very irregularly E. Babatngon Point, about 91m high, lies about 1.5 miles E of Baluarte Point. The town of Babatngon lies at the head of a

small bay on the W side of Babatngon Point, and the E part of the town is on a small bay on the E side of the point.

A pier, about 73m long, with a depth of 0.6m at its head, extends N from the NE part of the town. There is daily communication by small craft with Santa Rita and Tacloban.

Canauay Island (11°26'N., 124°51'E.) lies on the S side of the channel about 0.5 mile ENE of Babatngon Point. A group of drying rocks stand on the shoal ground fringing the N coast of Canauay Island. A detached 4.5m patch lies about 0.3 mile NNW of the island. A detached 5.5m patch lies about 0.5 mile N of Canauay Island.

A pilot station, which keeps a continuous watch, is located on Canauay Island.

Binuntuan Point (11°27'N., 124°53'E.), the N end of a hilly peninsula, lies about 1.5 miles E of Canauay Island. Ivantacut Islet, low and rocky, lies about 0.5 mile NNW of Binuntuan Point.

A 0.3m rocky patch lies about 0.2 mile N of the islet and is on the edge of a shore bank, which is very steep-to in this vicinity. The fairway of the channel is about 0.3 mile wide between this rocky patch and the shore bank extending from the N side of the channel. Small craft frequently pass S of Ivantacut Island, but the bottom is rocky and uneven.

Caltagan Island (11°26'N., 124°53'E.), 55m high and fringed with mangroves, lies close to shore about 0.5 mile E of Binuntuan Point. Samputan Point, on which there is a small village, lies about 1 mile SE of Caltagan Island.

Navahay Island, 34m high, lies about 0.3 mile NNE of Samputan Point and is located on the S part of the extensive shore bank that extends S from the N side of the channel between Tinigrapo Point and Santa Rita.

Small craft use a shallow channel N of Navahay Island, but the recommended channel lies S of that island.

6.83 Samputan Pass (11°25'N., 124°55'E.), through which the fairway of the channel trends, lies between the SW and S edge of the shore bank on which Navahay Island is located, and the shore bank that fringes the S side of the channel up to about 0.5 mile from the heads of the larger bays in the vicinity of Samputan Point.

From a position about 0.3 mile NE of the N end of Caltagan Island, the fairway of the channel trends SSE to Samputan Point and then about 2 miles ENE to Magkasuang Point.

It is narrowed by the shore banks to a width of about 0.1 mile between Caltagan and Navahay Islands, and has least swept depths of 5.8m about 0.3 mile E and NW, respectively, of Samputan Point.

Patches, with swept depths of 5.5m, lie in the fairway a little more than 0.5 mile E and about 0.5 mile NW, respectively, of the above point.

A 4.1m patch lies near the E entrance of the pass, on the S side of the fairway, about 1.8 miles ENE of Samputan Point. The N part of Samputan Pass is marked by beacons; one on each side of the entrance of the channel NE of the N end of Caltagan Island, and one on the W side of the channel eastward of the S end of that island.

The fairway through the E part of Samputan Pass is marked by the below-described beacon on the E side of a hill on Samputan Point.

Ranges for Samputan Pass are formed by three beacons on Samputan Point and indicate the middle of the fairway through the channel.

Two beacons, on the N side of the hill close S of the point, in range bearing 146.5°, lead through the NW reach. The rear beacon serves for both reaches.

A beacon, on the E side of the hill S of the point, in range bearing 251.25° with the rear beacon, leads through the E reach.

Pilotage.—Pilotage is compulsory through San Juanico Strait for vessels of 60 gross tons or over, and smaller vessels without local knowledge are advised to take a pilot.

Vessels approaching the strait from NW can obtain a pilot from the pilot station on Canauay Island. A small rowboat with an outboard motor serves as a pilot boat. It flies an "H" flag at the stern pole.

Anchorage.—Anchorage can be taken by large vessels in the W entrance of Janabatas Channel, in about 7 to 9m, mud. Smaller vessels can anchor inside the channel depending on draft.

6.84 San Juanico Strait (11°20'N., 124°58'E.) trends about 11.5 miles S from the E end of Janabatas Channel to Tacloban Harbor.

It has a width of about 0.3 to 0.5 mile, but in many places, shoals, rocks, and islets reduce the navigable width to about 0.1 mile. The shores are low and fringed with mangroves.

Santa Rita Island, about 30m high, lies on the N side of the N entrance of San Juanico Strait about 1.3 E of Magkasuang Point. It has a square-topped bushy summit, and an old fort, partly obscured by trees, is situated on the islet. The S end is steep-to, but a narrow reef and shoal water fringe the W side. A light-beacon stands close W of the SW point of Santa Rita Island.

The deep fairway of the channel is about 0.3 mile wide between Santa Rita Island and a shore bank, defined by the 5.5m curve, that encumbers a bight SW of the island.

A 6.9m patch is located about 0.2 mile NNW of a point on the SW side of the fairway, about 0.35 mile SSW of Santa Rita Island.

A buoy is moored about 0.3 mile NNW of the above-described point and marks the S side of the fairway. A 4.1m patch is located about 0.3 mile NW of the same point. There are rips in this vicinity.

Anajao Island (11°26'N., 124°58'E.), 16.4m high, is an islet that lies on the S side of the fairway. Its NW end should be given a berth of at least 137m.

Nababuy Island, 30m high, lies on the S side of the channel close SE of Anajao Island.

It is reported (1990) that an overhead power cable crosses San Juanico Strait about 1.5 miles S of Nababuy Island. The cable is supported by pylons (red and white) on either side of the strait, and there is a reported clearance of 17m.

A privately maintained lighted beacon stands at the N end of the strait, 0.3 mile E of Nababuy Island. There are a number of lighted buoys, buoys, and beacons as indicated on the chart.

The fairway of the preferred channel passes around the N and E sides of Nababuy Island at a distance of about 0.3 mile. Small vessels sometimes use the narrow channel S of Nababuy Island, but caution is necessary to avoid a detached, partly

drying reef close S of Anajao Island and the reefs fringing the shore on each side.

A number of shoal patches, with depths of 2.7 to 8.2m, lie in this channel and in its N approach.

Reefs and shoal patches, on the S and W side of the fairway, lie up to about 0.2 mile N and ENE of the N end of Nababuy Island. A detached 5m patch lies about 0.3 mile NW of Silaga Beacon.

A detached 5m depth lies in the fairway of the channel about 0.3 mile ENE of the NE end of that island, and a 3.2m patch lies in the middle of the fairway about 137m farther NE in a position about 0.3 mile NNW of Silaga Beacon.

A 7.3m patch is located close NE of the 3.2m patch. A beacon, on the W side of the fairway, is located about 0.1 mile E of Nababuy Island on the S part of a narrow steep-to reef that lies up to about 0.1 mile E of the island.

Silaga Beacon, a temporary low structure that is barely visible at HW, is located on the E side of the fairway about 0.3 mile E of Nababuy Island. It marks a steep-to rocky patch that dries at LW.

A number of shoal patches, with depths of 3.2 to 5.5m lie from 185 to 0.3 mile SE of the beacon.

A 0.4m rocky patch lies on the E side of the fairway about 0.3 mile S of Silaga Beacon. It is marked by a beacon. Shoal water lies up to about 137m WNW and 0.1 mile S. A detached 4.1m patch lies in mid-channel about 0.1 mile SW of the rocky patch.

Several 4.1 to 5.5m patches lie up to about 0.1 mile offshore from the W side of the channel about 0.5 mile and 0.75 mile S of Nababuy Island.

6.85 Torre Island (11˚ 24'N., 124˚ 59'E.), about 7.6m high, lies on the E side of the channel about 0.8 mile SE of Nababuy Island. A 5m patch lies about 0.3 mile W of the S end of Torre Island. The island is steep-to on its W side.

Between Torre Island and Bagalibas Island, about 1 mile S on the E side of the channel, the fairway follows mid-channel. The fairway passes E of a 4.6m patch that lies about 0.1 mile ESE of the village of San Vicente, located about 0.5 mile SSW of Torre Island.

A 5m patch is located about 0.3 mile SE of the same village.

Bagalibas Island and several islets close N are steep-to on their W sides. A 0.9m patch lies about 0.1 mile N of Guintiguian Island, a small islet, 27m high, located about 0.3 mile N of Bagalibas Island.

A 6.4m patch lies close off the NW extremity of Guintiguian Island. A 6.4m patch is located about 0.1 mile W of the NW extremity of Bagalibas Island. The fairway lies between a 4.6m patch about 0.1 mile SW of Bagalibas Island and a 4.6m patch about 0.2 mile farther W.

A drying reef, with a 2.7m patch about 0.1 mile SSW, lies on the W side of the fairway about 0.3 mile off the W shore about halfway between Bagalibas Island and Uban Point.

6.86 Uban Point (11˚ 22'N., 124˚ 59'E.) lies on the W side of the strait. A beacon stands on the W edge of the dangers on the E side of the fairway opposite Uban point.

A small steep-to reef lies on the E side of the fairway about 0.3 mile N of the beacon. The channel is only about 0.1 mile wide between the beacon and a small drying reef W of it.

Between Uban Point and the Bagasumbut Islands, which lie about 1.8 miles S on the W side of the strait, the fairway trends S. It is barely 0.25 mile wide between the shoals and islets on either side.

A 3.2m rocky patch lies on the E edge of the fairway about 0.8 mile S of the beacon opposite Uban Point.

Three 4.1m patches lie on the W side of the fairway within 0.2 mile NE of the northern Bagasumbut Island, and an islet lies on the E side of the fairway nearly 0.25 mile farther NE. Cauayan Point Beacon is located on a reef that lies about 0.5 mile S of the northern Bagasumbut Island.

A 3.2 to 5.5m patch, on the W side of the fairway, lies up to about 0.3 mile SE of the latter island and 0.2 mile E of the beacon. In this vicinity the fairway favors the steep-to E side of the strait.

6.87 Cangom Island (11˚ 19'N., 124˚ 58'E.) lies close to the E shore of the strait and is steep-to on its W side.

A 4.6m patch, on the W side of the fairway, lies about 0.3 mile SW of Cangom Island.

A reef, with a depth of 0.6m, lies on the E edge of the fairway a little less than 0.5 mile S of the island. A buoy is moored in 9.1m on the W edge of the latter reef. A 5m patch lies on the W side of the fairway about 0.2 mile W of the reef.

The channel fairway tends SSE and lies close to the steep-to W sides of the Kabalawan Islands, about 0.8 mile S of Cangom Island, and Tinaogan Point, about 0.8 mile farther SSE. The W side of this part of the strait is encumbered with steep-to shoals.

A bridge crosses the river from the W side of Kabalawan Island in a SW direction and from the N side of that island in a NNE direction to the opposite shore.

The bridge has a vertical clearance of 30.7m and a horizontal clearance of 176m. Four lights are shown from the central portion of the bridge.

Between Tinaogan Point and Anibong Point about 1.5 miles SSE, the fairway of the channel trends SE to Tacloban Harbor and the S entrance of the strait, Lazareto Island, on the SW side of the fairway, lies about 1 mile SSE of Tinaogan Point and is NE a number of islets and extensive shoals that encumber the W side of this part of the strait. A 4.1m rocky patch lies mid-channel about 0.3 mile NNW of Lazareto Island.

The fairway of the channel is about 0.2 mile wide between the latter patch and an extensive shoal that lies up to about 0.5 mile off the NE side of the strait between Tinaogan Point and Binatac Point, about 2 miles SE.

The light, shown from Tacloban, bearing 139˚, is reported to lead through the best water in this part of the channel; however, it appears to be very close to the edge of the shoal on the NE side of the strait. Vessels are advised to use this range with caution.

The village of Amandayehan is situated on the NE shore of the strait about 0.5 mile NW of Binatac Point. It is approached from the SE through a narrow 6 to 9m channel that trends close around the W side of the latter point. A wharf at the village has a berthing length of 30m with depths alongside of about 3 to 4m. A road connects with Basay, and there is regular ferry service to Tacloban. Inter-island vessels call occasionally.

Janabatas Channel to Biliran Strait

6.88 Between Baluarte Point and Talairan Point, about 10.5 miles W, the coast receded about 8 miles S to form Carigara Bay. A steep-to shore bank, with depths of less than 1.8m, fringes the SE side and head of the bay within about 0.8 mile offshore. The W side of the bay is very steep-to, and the 20m curve lies about 0.3 mile offshore.

From Baluarte Point the coast trends about 2 miles SSW and is very high and steep-to. It then becomes very low and trends about 11 miles SW to the head of Carigara Bay.

There are a number of small towns and villages on this latter part of the coast, and numerous rivulets, navigable only by boats, empty from it.

The small town of Barugo is situated about 7.5 miles SW of Baluarte Point. There is a post and telegraph office at the town.

Anchorage.—Anchorage can be taken, in 14.6m, about 1 mile offshore, with a large white storehouse in the town bearing 170°. The edge of the shore bank extends about 0.8 mile offshore in this vicinity.

Carigara (11°18'N., 124°41'E.) is the largest of the towns on Carigara Bay. The church and a monument on the beach at Carigara are prominent. A light is shown from the W side of the mouth of a small river that empties into the bay at the town.

A stone causeway extends N from the town. Diesel oil, gasoline, and fresh water can be obtained. There is a post and telegraph office, and a highway connects Carigara and Barugo with Tacloban.

Anchorage.—Anchorage can be taken about 0.8 mile N of the town, in about 15m, mud. Both this anchorage and that off Barugo are sheltered from the Southwest Monsoon and exposed to the Northeast Monsoon.

From a position about 5 miles W of Carigara the steep-to SW side of the bay trends about 7.5 miles NW to Talairan Point. It is backed by a mountain range that rises abruptly from the sea to heights of about 152m to over 305m less than 0.75 mile inland, and to summits of as much as 716m within 3 miles inland.

Talairan Point (11°26'N., 124°32'E.) rises abruptly to a 390m summit about 0.5 mile SW. Pacdahauan Peak, 636m high, and another peak, 570m high, are conspicuous landmarks that lie about 1.3 miles W and WSW, respectively, of the point.

Between Talairan Point and Rabin Point, about 15.5 miles NW, the coast is fronted by Biliran Island. The passage separating that island from Leyte narrows from both ends to a width of less than 91m at Biliran Strait, which is so shallow that only small craft can use it.

The E approach to Biliran Strait recedes about 3.75 miles W between Talairan Point and the S side of Biliran Island, about 3 miles N. The coast on the S side of this approach is steep-to, with depths of more than 18.3m within about 0.3 mile offshore, but a steep-to shore bank extends about 0.3 mile offshore about 0.5 mile SE of the narrowest part of the strait.

The N side of the E approach to the strait is fringed by reefs and shoals that lie up to about 0.5 mile off Biliran Island between Magbagun Point, about 3 miles NNW of Talairan Point, and Poro Islet.

A detached 1.8m patch lies about 0.5 mile mile SW of Magbagun Point on the W side of the narrow channel leading into Magbagun Cove, a small bay on the W side of Magbagun Point. A detached 8.2m patch lies about 0.5 mile mile SW of that point.

Biliran Strait

6.89 **Biliran Strait** (11°27'N., 124°29'E.), the narrowest part of the passage separating Biliran Island from Leyte, lies between a point on the Leyte coast about 4 miles WNW of Talairan Point and Poro Islet, about 108m NNE.

The latter wooded islet is on the SW edge of a drying reef that extends about 0.5 mile mile S from the S extremity of Biliran Island.

The S and SW edge of the above reef and Poro Islet are steep-to. A narrow reef, from which a light is shown, extends about 41m from the point on the S side of the strait and narrows the channel to a width of about 69m.

This part of the strait has a least depth of 4m and the fairway lies within about 46m of Poro Islet. There is a least depth of about 3m over that part of an extensive shore bank that lies across the W approach to the strait.

Tides—Currents.—At times the tidal currents run through the strait with considerable velocity and caution must be exercised.

Culajit Islet, rocky and nearly awash at HW, lies on the N side of the W entrance of Biliran Strait, about 0.3 mile W of Poro Islet.

6.90 **Biliran** (11°28'N., 124°28'E.) is a small town on the N side of the W entrance of Biliran Strait. A stone causeway extends about 0.3 mile S from the town. There is a telegraph office at the town, and small inter-island vessels call regularly.

It is reported that a road bridge has been constructed across Biliran Strait, linking Leyte and Biliran Islands.

Anchorage.—Anchorage can be taken, in about 5 to 6m, mud, about 0.3 mile W of Culajit Islet, but anchorage N of that islet is not recommended as depths decrease abruptly.

Biliran Island

6.91 **Biliran Island** (11°35'N., 124°30'E.) is heavily wooded and very mountainous, attaining a height of 1,300m on the summit of Mount Suiro at its SE end.

Mount Naliwatan lies in the N part of the island. It is very prominent, having a summit that appears conical from W.

Most of the coast rises abruptly from a low shore to hills and mountains close inland, but there is a low coastal plain on the S and SW sides of the island.

Pawikan Point (11°30'N., 124°36'E.) is the SE extremity of Biliran Island. From Pawikan Point the coast trends about 3 miles NNE to Gamay Point. A conspicuous rock, painted white and visible 3 or 4 miles, lies about 0.3 mile S of the latter point.

Caibiran (11°34'N., 124°35'E.) is the largest of several villages on the NE side of Biliran Island. There is a post office and radio communication at Caibiran. Small vessels call occasionally.

Amambahag Point (11°41'N., 124°32'E.), the NE extremity of Biliran Island, lies about 6.7 miles NNW of Caibiran.

Buhoc Point (11°40'N., 124°20'E.), 110m high, is the NW end of Biliran Island. Tincansan Islet lies about 0.3 mile W of the point and is separated from it by a deep channel. Just W of

the village of Telegrafo, on the S side of Buhoc Point, there are some conspicuous reddish-brown cliffs about 61m high.

From Buhoc Point the coast of Biliran Island trends 4.5 miles SE to Bagombong Point and appears rather high.

Rabin Point (11°34'N., 124°19'E.) is the NW extremity of Leyte and S entrance point of the NW approach to Biliran Strait. It is the termination of a high and wooded promontory that rises to a 194m summit about 2 miles SE of the point and to higher peaks farther S.

A bank, with a depth of 12.8m at its outer end, extends about 0.8 mile NNW from the point which is otherwise steep-to and has depths of more than 18m about 0.5 mile offshore.

Gigantanban Island (11°33'N., 124°15'E.), 46m high, wooded and marked by a light on its summit, lies 2.25 miles W of Rabin Point. The passage between the island and the coast of Leyte is 1.5 miles wide, deep, and clear of dangers. From Rabin Point, the coast, which is fronted by a low sandy shore, trends about 2 miles SW to Dungun Point.

The NW approach to Biliran Strait is entered from W between Bagombong Point and Rabin Point. Both sides of the approach trend quite regularly SE and gradually narrow the passage to a width of about 2.25 miles, about 2 miles W of Poro Islet.

The low NE shore, which consists of shingle beaches interrupted by a few small reef-encumbered bights, is backed by a narrow coastal plain and high mountains inland. The SW shore is also low, but is closely backed by very high hills. There are a number of villages on both shores.

6.92 **Naval** (11°33'N., 124°24'E.), largest of the small towns on the SW side of Biliran Island, is situated on the NE side of the approach about 3 miles SSE of Bagombong Point. A radio tower, marked by a light, is located at Naval.

A causeway, with a depth of 1.8m at its outer end, extends about 122m SW from the town and is suitable only as a landing for small boats. There is a radiotelegraph office at the town, and inter-island vessels call each week from Cebu.

Anchorage.—Anchorage can be taken close off the edge of the shore bank, in 5.9m, about 0.1 mile off the end of the causeway. Large vessels can anchor a little farther off, in 18 to 37m, mud.

Calubian (11°27'N., 124°26'E.) (World Port Index No. 58840) is a small town on the Leyte coast, W of Biliran Strait. The shore-bank lies within less than 0.25 mile offshore in this immediate vicinity, but it extends nearly 0.5 mile offshore a little eastward. A causeway, with a depth of 2.7m at its outer end, extends NE from the town.

The ruins of a wooden pier, bare at LW, lie about 0.2 mile NW of the causeway.

There is a post and telegraph office at the town, and inter-island vessels call regularly from Cebu. That part of the approach that lies N of Calubian affords moderately sheltered anchorage, in 12 to 22m, mud.

An extensive shore bank, with depths of about 3 to 5m, encumbers the entire W entrance of Biliran Strait between a position about 0.5 mile E of Calubian and Poro Islet, about 3 miles ENE of the town. The W edge of this shoal water trends NNE across the approach.

Leyte Bay (11°25'N., 124°28'E.), which is very shallow, indents the Leyte coast between Calubian and Manoc Point, about 2 miles E, on the S side of the W entrance of Biliran Strait.

A narrow channel, with depths of about 2 to 4m, leads between the shore banks to the small town of **Leyte** (11°23'N., 124°30'E.) (World Port Index No. 58680) on the E side of the head of the bay. There is a pier, suitable for small craft at HW, located at the town.

Islands in the Samar Sea

6.93 There are five mountainous islands that lie in the central part of the Samar Sea. These islands, together with a number of detached islets and several rocks and shoals adjacent to them, are very steep-to.

There are a few small villages on the islands, but otherwise they are sparsely inhabited. The detached islets, some of which are very small, lie up to about 2 miles off the larger islands.

Tagapula Island (12°04'N., 124°11'E.) is steep-to and clear of dangers, except for Espana Shoal, a 3.7 to 5.5m area that lies about 0.8 mile E of the NE extremity of the island. Sibugay Island, 130m high, lies 0.75 mile off the N coast of Tagapula Island, with a deep channel between.

Almagro Island (11°55'N., 124°18'E.), which rises to a flat summit in its S part, lies about 7.5 miles SE of Tagapula Island. The small village of Almagro is situated at the head of a cove indenting the SW end of the island.

Santo Nino Island (11°55'N., 124°26'E.) is closely fringed by a steep-to rocky ledge. A rock, 3m high, and a rock, 16.1m high, lie on the edge of the ledge close off the middle of the E side and W extremity of the island.

A concrete column, 9.8m high, stands on an old fort on the N end of Santo Nino Island.

6.94 **Santo Nino Harbor** (11°56'N., 124°27'E.), a small cove at the N end of Santo Nino Island, affords excellent typhoon refuge for small craft up to 46m long and is frequented by coastal vessels.

The entrance channel, which has a depth of 3.1m, is only about 18m wide between a partly-drying shingle spit that extends about 37m W from the E entrance point and a rock. The rock, with a depth of 0.6m, that lies on the W side of the channel close E of some rocks awash.

The channel leads into a circular basin, about 183m in diameter, but most of the rest of the harbor dries at LW.

The shingle spit on the E side of the channel is covered at HW, but its edge is visible and should be passed close to on a course of 158° into the basin.

Anchorage can be taken in the center of the basin, in about 10.5m, mud.

Maripipi Island (11°48'N., 124°19'E.) lies about 5 miles S of Almagro Island and about that distance N of the NW end of Biliran Island. It is steep-to and clear of dangers.

Maripipi, a town marked by a conspicuous church with a galvanized iron roof, is situated on the SE coast of the island. The seaward end of the pier at the town was reported to be destroyed. Maripipi has regular communication with Cebu and Tacloban and is connected with the telegraph system by radio.

Sambauan Islets (11°46'N., 124°15'E.), 18 to 40m high, are four rocky islets that lie close together about 2 miles WSW of Maripipi Island. They are situated on a narrow, steep-to sand

shoal. A concrete column, 9.8m high, stands on the W extremity of the largest islet.

Buga Rock, 2.4m high, is a detached danger that lies about 1.3 miles W of Paripipi Island and 0.75 mile N of the Sambauan Islets. A rock lies awash close NE of Buga Rock.

Camotes Sea

6.95 The Camotes Sea can be entered northward by way of the Visayan Sea or the Samar Sea, from southwestward by Bohol Strait, and from SE by way of the Bohol Sea through Canigao Channel.

Most of the Camotes Sea has considerable depths with the exception of its S part where Danajon Bank lies along the entire length of the N coast of Bohol. Several detached shoals lie in the N part of the sea and there are patches of reef in the SE entrance area.

The large Camotes Islands, lying in the central area of the Camotes Sea, are high and steep-to. Other small islands and islets lie in or near the N entrance, and the Cuatro Islands group is located in the SE part of the sea.

The N end of Cebu consists of flat, low plains and rolling hills rising to 143m. Southward, the remainder of the E coastal section of Cebu has a narrow coastal plain lying at the foot of rolling hills that are backed by mountains more than 610m high in places.

There are no good harbors for large vessels along this sector of Cebu. Unprotected anchorages are to be found almost anywhere along this coast, in depths of 91m or less, and at a distance of about 0.3 mile off the narrow coastal reef. A number of small towns and villages are situated near this coast.

The W coast of Leyte trends about 88 miles SSE from Dungun Point to Green Point. As far as Dulhugan Point, the area is mountainous and rugged with no pronounced high peaks.

This part of the coast is broken by numerous small bays and coves. In many places the mountains rise sharply behind the shore, and such small areas of coastal plain, as do exist, are forested or planted to coconut trees.

Ormoc Bay, about 10 miles E of Dulhugan Point, is the only large indentation on the W coast of Leyte. It is deep and clear of dangers and the narrow fringing reefs are steep-to.

Eastward of Ormoc Bay is an area of cultivated gently-rolling hills. Mountains blanket the S end of Leyte and are irregular in height and have no pronounced ranges.

They fall off rather sharply in the vicinity of the coast, leaving a very narrow coastal plain. A number of unimportant rivers drain the S half of the W part of Leyte.

The N approaches to the Camotes Sea from the Samar Sea and Visayan Sea are deep and adequately lighted. A number of islands and islets lying N of Cebu have deep channels between them, but most are fringed by foul areas and should not be passed close to.

There are several unmarked shoals in the N part of the Camotes Sea.

With the exception of the NE end of Cebu, this part of the coast of Cebu as far as Managao Point is mostly steep-to. The NW part of the coast of Leyte is generally steep-to, except the area between Canaguayan Point and Duljugan Point, where there is considerable steep-to coastal reef.

The principal towns in this section are Bogo on Cebu, and Palompon, Villaba, and San Isidro on Leyte.

Cebu—Off-lying Islands and Dangers

6.96 Near the E coast of Cebu, the 20m curve lies about up to 2 miles off the coast and contains several detached coral heads with depths of 1.8m. There is some coastal reef in this same area which dries for a distance of 1 mile offshore. A deep channel lies between the coastal reef and the outer detached heads.

Manocmanoc Islets (11°35'N., 124°03'E.) are three flat-topped, vertical-sided, uninhabited rocks lying on a reef. The northern and largest is 8.8m high, the middle one 14.6m high, and the S and smallest is 16.4m high.

The reef between them bares at LW. There is some foul ground about 0.3 mile W of the group, and a 16.5m patch lies about 1.5 miles ENE of the northernmost island.

Carnasa Island (11°31'N., 124°06'E.), lying about 4.25 miles SE of Manocmanoc Islets, has a group of wooded hills, 45m high, at the NE part of the island. On the E side are 18.3m cliffs.

A detached rock, 13.1m high, lies close off the S end of the island. The SE side of the island is inhabited.

Tide rips occur in the area midway between Carnasa Island and Manocmanoc Islets.

Maria Islet (11°29'N., 124°07'E.), 18m high, rocky, and steep-to, lies 1 mile SSE of Carnasa Island. The channel between is 0.5 mile wide, with a least charted depth of 22m.

Gato Islet (11°27'N.,124°01'E.),lying nearly 5.75 miles SW of Carnasa Island, is a precipitous rock, 97.7m high, that forms a prominent landmark. There is some vegetation on its top. The cliffs are underworn by the action of the sea, making landing almost impossible.

Directions.—Vessels from Jintotolo Channel bound for the port of Cebu pass about 2 miles S of Gato Islet if intending to proceed N of Malapascua Island; those vessels using the passage between Malapascua Island and the mainland of Cebu should pass about 6 miles S of Gato Islet.

6.97 **Malapascua Island** (11°20'N., 124°07'E.) is covered by small trees and bushes. Its shoreline is very irregular and consists of a succession of rocky headlands with many off-lying pinnacle rocks. Its N, E, and S coasts are fringed by reefs and shoals for a distance of 0.5 mile.

There is an islet, 7.6m high, and several rocks, 0.9 to 4.2m high, lying about 0.4 mile SW of Malapascua Island. Close off the NW point of the island there is a rocky islet, 5.5m high. A rock, 0.3m high, lies 0.5 mile N of the same point, and a rock lies awash nearly 0.5 mile E of the 0.3m rock.

During the Northeast Monsoon, good anchorage can be taken, in 18.3m, in a position about 0.5 mile SW of a light on Malapascua Island.

Chocolate Islet (11°19'N., 124°04'E.) lies about 3.25 miles SW of Malapascua Island. It is a small, steep-to, wooded islet and forms a prominent landmark. Tide rips occur in the area about midway between Chocolate Islet and Bulalaqui Point.

Monad Shoal (11°17'N., 124°12'E.), a 10.1m rocky area about 1.3 miles in extent, lies about midway in the N entrance of the Camotes Sea. The bottom consists of sand and boulders.

A shoal patch with a least depth of 24.5m lies 4.5 miles ESE of the shoal.

A 10.1m patch has been reported (1995) to lie about 3.5 miles SE of Monad Shoal.

Nunez Shoal (11°06'N., 124°13'E.) and **Calangaman Island** (11°07'N., 124°15'E.) lie 11.25 miles and 13.5 miles E, respectively, of Bogo Bay. A shoal area, with a depth of 1.4m, surrounds Calangaman Island. Nunez Shoal is a steep-to coral head with a depth of 5.5m.

During the Northeast Monsoon (October to March), good anchorage sheltered from the sea exists, in a depth of 14.6m, off the S side of Calangaman Island.

6.98 Ormoc Shoal (11°02'N., 124°09'E.), a steep-to shoal with a least known depth of 8.2m, lies 6.25 miles SW of Calangaman Island. This shoal should be avoided as there may be some coral heads on it with less depths than charted.

Capitancillo Islet (11°00'N., 124°06'E.) is 4.5m high and has a reef extending about 0.5 mile N and S. A steep-to reef, with a depth of 4.6m, lies about 0.8 mile N of the islet.

There are considerable depths in this portion of the Camotes Sea, the maximum being 869m about 3 miles SE of Capitancillo Islet.

The NW part of the coast of Leyte, from Dungun Point SSE to Canaguayan Point, has the 10m curve approaching mostly close-to, its greatest distance off being 0.75 mile in the vicinity of Canaguayan Point.

To the S of the latter point, and as far as Duljugan Point, drying coastal reef extends up to 2 miles offshore.

Cebu—East Coast

6.99 Bulalaqui Point (11°17'N., 124°04'E.), the NE extremity of Cebu, is formed by a 27m cliff which rises steeply inland to a height of 44m. The point is steep-to on its N side.

Between Bulalaqui Point and Campatoc Point, about 1.8 miles S, there is a small unnamed bay blocked by drying reefs. Coastal reefs extend from about 0.4 mile E of Campatoc Point in a direct line to the E side of Bulalaqui Point.

A wreck lies stranded on the edge of the reef about 0.5 mile N of Campatoc Point. The bow and foremast were visible.

Campatoc Reef (11°13'N., 124°04'E.), with a least depth of 1.8m, lies about 1.8 miles S of Campatoc Point.

From Campatoc Point the coast trends SSW for about 7 miles to Malontod Point. This section of coast is generally low, bordered by mangrove, and fringed by a coastal reef extending 0.75 mile offshore in places.

6.100 Bogo Bay (11°06'N., 124°02'E.), lying between Malontod Point and Nailon Point, about 5.5 miles S, is nearly blocked by a reef, most of which is awash. Between Malontod Point and Tindug Point, about 1.8 miles SSW, there is a bluff, rocky shore about 4.5m high.

From Tindug Point, the remainder of the shores of the bay are mostly bordered by mangrove.

The navigable entrance of the bay is a break in the reef about 1.8 mile NNW of Nailon Point. The entrance is about 0.2 mile wide and has a depth of 48m. From this entrance a channel trends W about 0.8 mile and then branches. A beacon marks the edge of the reef on the S side of the channel at the juncture.

One arm, of no value to navigation extends NW, and the main channel trends SW for 0.75 mile where it again divides. One arm extends toward the entrance of the Daijagon Canal and the other arm extends S, shoaling gradually toward the town of Bogo.

There is a small coral patch, with a depth of 0.9m, about in the center of the reach which trends SW. A beacon marks the patch and should be passed on it N side.

A wreck, with a 0.6m depth, lies on the edge of the reef about 0.2 mile W of the latter beacon.

Anchorage.—Fairly good anchorage can be taken, in 9 to 11m, mud, SW of the beacon in a position about 1.3 miles N of the town of Bogo. Here the channel widens to about 0.2 mile and is well protected from heavy seas, but it is open to the winds between NNE and ESE.

6.101 Bogo (11°03'N., 124°00'E.) (World Port Index No. 58910), a town with a church, stands on the SW side of Bogo Bay. There is a stone pier in front of the town. It can be reached by small boats at HW, but at LW it dries off its outer end. A light stands on the N side of the entrance of the Bogo Bay.

Baluarte Point, about 1 mile NNW of Bogo, has a causeway, with a concrete landing at its head, extending NE across the reef to the channel.

There was a reported LW depth of 3m at the outer end; there were no dolphins or mooring bitts. The causeway is connected with a road to Bogo.

The village of **Polambato** (11°04'N., 124°00'E.) is situated on Baluarte Point.

On a clear day, at LW, the reefs in Bogo Bay are plainly defined, showing a bright green, but with the sun in the W and the tide high, it is hard to distinguish the reefs at the entrance. There are numerous fish traps on the reefs.

During the Northeast Monsoon when the wind is strong, there is a heavy sea running which combined with the current that sets down the coast at quite a good velocity, makes it hazardous to enter without considerable way on a vessel.

6.102 Nailon Point (11°03'N., 124°02'E.) is low, wooded, and fringed by a narrow steep-to reef. It can be passed at a distance of 0.5 mile.

From Nailon Point, the coast trends S for about 11 miles to Managao Point.

The shores are mostly fringed by narrow, steep-to reefs, nowhere exceeding 0.25 mile in width. The coast is slightly indented by Tabagon Bay.

Discolored water has been seen at various times off Managao Point, giving the impression of shoal water, but a survey failed to develop anything of this nature.

Saac Point (11°00'N., 124°03'E.), 4 miles S of Nailon Point, is a low, wooded bluff, steep-to and clear of dangers. Less than 1 mile inland from the point, the land rises to a height of about 122m.

Between Saac Point and Pamoboan Point, about 2.25 miles S, the coast is irregular and consists of bold rocky cliffs, 6 to 9m high, back of which the land rises rapidly.

Bantulin Point (10°55'N., 124°03'E.) is a steep, clay bluff about 15.2m high, inland of which the land rises to a height of over 122m within 0.5 mile of the point. It can be recognized from N by a bare cliff showing white on its N side.

The town of Tabogon, 2 miles NNW of Bantulin Point, is partly obscured by trees, and the white-roofed school is all that can be seen from seaward.

The depths off Tabogon are too great to afford anchorage. At HW, small boats can land at the ruins of a small stone dock. There is a telegraph office in the town.

Leyte—Northwest Coast

6.103 A mountain chain, about 5 miles inland, trends parallel with the coast. Mount Majuyag, 1,348m high and about 25 miles E of Gumalac Island, is probably the highest point on the island.

Between **Dungun Point** (11˚32'N., 124˚17'E.) and Matung Point, nearly 8 miles SSE, the coast is generally fringed by a narrow steep-to reef. Tagawigan, Daja, and Tinago are small coves, blocked by reefs, that indent this section of coast; villages of the same names as the coves lie at their heads.

A prominent house, with a galvanized iron roof, stands at the head of the small bay of which Dungun Point is the W entrance point.

Caution.—Numerous unlit fishing stakes and small dugout canoes occupy the waters of the NW coast of Leyte from **Gigantangan Island** (11˚33'N., 124˚15'E.) and **Calangaman Island** (11˚07'N., 124˚15'E.).

6.104 San Isidro Bay (11˚24'N., 124˚20'E.) lies nearly 1 mile S of Matung Point. The center of the bay is deep and affords good anchorage during the Northeast Monsoon, but the head is filled by shoals and drying mud flats.

San Isidro (11˚25'N., 124˚20'E.) (World Port Index No. 58830), a town at the head of the bay, is a port of call for small coasting vessels. An L-shaped concrete pier, about 0.5 mile SW of the town, had a depth of 3.6m off its seaward face. Vessels can steer for the pier on a bearing of 090˚ and anchor, in 5.5m, about 0.3 mile seaward of it.

Five partly submerged wrecks lie within a radius of about 0.2 mile of the face of the pier.

Between Sangabon Point, the S entrance of San Isidro Bay, and Canapog Point, 10.5 miles SSE, there are four small bays and a number of coves.

The bays are quite conspicuous as the entrance points are generally formed by bluffs 15 to 23m high.

Arevalo Bay (11˚22'N., 124˚21'E.), about 2 miles S of San Isidro Bay, is nearly blocked by reefs and shoals. A bare cliff marks the N entrance point.

The village of **Arevalo** (11˚22'N., 124˚22'E.) (World Port Index No. 58820) is situated in the SE part of the bay. There is a small stone landing on the S shore of the bay just inside Cauayan Point, the S entrance point of the bay.

Anchorage can be taken, in 5.5m, about 0.1 mile N of the landing and partially protected from SW by Cauayan Point.

Pulingbato Hill, about 2.5 miles S of Cauayan Point and 0.6 mile inland, forms an excellent landmark. It rises gently to a flat-topped cone.

Tabango Bay (11˚17'N., 124˚23'E.), about 4 miles SSE of Cauayan Point, is nearly blocked by reefs.

Campopo Bay (11˚17'N., 124˚22'E.) is separated from Tabango Bay by Liog Point, over 30m high. A large part of this bay is encumbered by reefs and shoals.

Burabud Point, at the S entrance of Campopo Bay, is a sharp, prominent cone that forms a good landmark.

Dauajon Islet (11˚16'N., 124˚22'E.) lies about 1 mile SW of Burabud Point. The channel between it and Leyte is deep and clear in the fairway. The islet is mostly steep-to except about 0.3 mile NW of it where there is a depth of 8.2m. Dauajon Islet is sometimes not clearly visible against the dark background of the mainland of Leyte.

6.105 Silad Bay (11˚14'N., 124˚23'E.), about 2.5 miles S of Burabud Point, is fringed by drying reef. The village of Silad is situated on the SE shore of the bay.

An 18.3m rock lies close offshore in a position about midway between Silad Bay and Villaba Bay, 1.5 miles S.

The rock is bare, sharp-pointed, yellow in color, and is a good inshore landmark.

Villaba (11˚13'N., 124˚24'E.) (World Port Index No. 58810) is situated at the head of Villaba Bay. A rock causeway, about 0.5 mile SW of the town, has a depth of 1.5m off its end. There is a privately maintained pier, with a depth of 2.7m at its outer end, close S of the town. Two private mooring buoys, in a depth of 3.6m, are located off the open coast about 1.5 miles SW of Villaba.

Anchorage can be taken, in 9.1m, at the entrance of the bay, about midway between the S entrance point and the aforementioned 18.3m rock. Anchorage, in 5.5m, can be taken about 0.2 mile off the end of the landing.

Canaguayan Point (11˚04'N., 124˚22'E.), at the N entrance of Port Palompon, is the most salient point in this vicinity. It is low, flat, covered by coconut trees and fringed by mangrove.

It is bordered by a reef and a bank, with a depth of 6.4m at its outer end, extends about 0.6 mile SW from the point.

6.106 Port Palompon (11˚03'N., 124˚23'E.) (World Port Index No. 58800), the principal commercial port in western Leyte, is formed by a narrow channel lying between the mainland of Leyte southward of Canaguayan Point and the N end of the drying reef surrounding Taboc Island and lying over 0.3 mile S of the point.

This is the only approach to the town of Palompon, as the S end of the channel is blocked by reef. Mangrove-covered Taboc Island and its surrounding reef protects the anchorage from W winds and seas.

There is a T-head concrete pier fronting the town. This pier has a berthing face of 101m. There were depths from 6.7m at its N end to 8.8m at its S end.

There is anchorage for vessels up to 40m in length, in a depth of 16m, mud, about 0.2 mile SW of the pier, but the swinging room is restricted.

Directions.—Enter Port Palompon from a position with Canaguayan Point bearing 046˚ and the light at Palompon bearing 105˚; then steer for the light on a 105˚ heading.

The reefs on either side of the channel show well at LW and are generally marked by fish traps and bamboo stakes with bushy tops. When the pier at Palompon bears 140˚, haul S in mid-channel and head for the pier, or anchor as described above. There are no pilots available.

Gumalac Island (11˚00'N., 124˚23'E.) is low, mangrove covered, and lies on the same reef as Taboc Island. This reef extends in places more than 0.5 mile W from the islands.

Cabgan Island is a similar but smaller island lying on the reef S of Gumalac Island and separated from it by an unimportant channel forming a break in the reef. Cabgan Island is also surrounded by reef which extends about 0.5 mile seaward.

Caution.—The reefs which surround the aforementioned islands and border the coast from Canaguayan Point to Duljugan Point, about 9 miles S, have their greatest width about 2.5 miles NW of Duljugan Point.

Although marked by stakes at many places along its edge, a number of vessels have struck this reef. When rounding the reef from N, mariners are advised that Canaguayan Point should not be brought to bear less than 014° until Duljugan Point bears less than 111°.

Camotes Sea—West Part

6.107 The E coast of Cebu, between Managao Point and Bagacay Point, about 30 miles S, has a relatively narrow coastal plain varying from 46m to 0.75 mile as far as Kotkot Point where it begins to widen. Hills rise between 122 to 152m, 1 mile inland from the coast, and between Danao Point and Kotkot Point, they rise to 396m about 3.5 miles inland.

Streams are numerous along this section of coast, but none are navigable and they become very small during the dry season.

This coast is rather irregular, but there are no large indentations of importance as such.

Towns of any importance in this area are Danao and Liloan. There are a number of villages along the coast.

Managao Point (10° 53'N., 124° 03'E.) is low, rocky, and steep-to. It appears very prominent when coming from N or S. Hills slope down to the shore in this vicinity and rise gradually to 91 and 122m at about 1 mile inland.

The white roof of the school at Tagnukan, about 0.5 mile WSW of Managao Point, is prominent.

6.108 Borbon (10° 50'N., 124° 02'E.) (World Port Index No. 58920), a small town, lies at the mouth of the Jimuguit River. A church with a galvanized iron roof stands on an elevation S of the town; it is a good landmark although obscured by trees. A stone mole can be used by small boats at HW.

A wreck, awash about 0.3m at HW, lies on the edge of the reef 37m SE of the stone mole. The shore reef N and E of Borbon is quite extensive and backed by a thick growth of mangrove.

The Jimuguit River is small and can be entered only by small boats at HW.

Anchorage can be taken, in 37m, mud, about 229m from the edge of the shore reef and with the church at Borbon bearing 294°.

Bingkay Point (10° 48'N., 124° 01'E.), about 5 miles S of Mangao Point, is a 6.1m rocky bluff covered by vegetation. A series of these bluffs and an occasional short strip of white sand beach forms the coast for 1 mile on either side of Bingkay Point.

6.109 Sogod Bay (10° 45'N., 124° 00'E.) (World Port Index No. 58930) is clear and steep-to, but it offers no protection from E winds and sea. At the NW part of the bay, there is a very peculiar steep-sided, narrow ravine, 9 to 12m deep, which penetrates nearly 1 mile inland and up which the sea enters for about 274m.

A prominent cliff, 17m high, is located 0.5 mile S of the ravine. A reef extends 91 to 274m offshore from here to 1 mile S of the town of Sogod.

Sogod, marked by a light at the head of Sogod Bay, is prominent from seaward, the town being situated on a slope and with few trees to obscure it.

A church on elevated ground back of the town is prominent from NE and E, and the municipal building, about 0.3 mile S, also shows from NE.

Catmon Point (10° 44'N., 124° 01'E.) is low and consists of dark sand and gravel. The Bao River discharges through the point and thick coconut groves line the shore on both sides.

Catmon, a town about 0.8 mile S of Catmon Point, is almost entirely concealed from seaward by coconut trees.

The church at Catmon stands on an elevation in a position about 0.5 mile S of Catmon Point. It is very conspicuous, having a prominent tower surmounted by a dome.

A highway bridge across the Panalipan River, 5 miles S of Catmon Point, shows prominently from seaward.

Binongkalan Point (10° 38'N., 124° 02'E.) is low, steep-to, and composed of dark rock. The point lies about 5.3 miles S of Catmon Point. The village of Binongkalan is situated on the slope immediately W of the point and consists of a cluster of brown houses visible from seaward.

Luyang (10° 36'N., 124° 01'E.), a good-sized village, lies at the mouth of the Luyang River about 1.8 miles S of Binongkalan Point. The bar of the river is shoal and can be crossed only at HW by small craft.

6.110 Port Carmen (10° 35'N., 124° 01'E.) (World Port Index No. 58940) is entered on the S side of a reef, which extends 731m SSE from **Poo Point** (10° 35'N., 124° 02'E.), which lies 2 miles N of Catadman Point. It is nearly filled with reefs and mud flats and affords a very limited anchorage area.

The entrance, 183m wide with a least depth of 10.1m, lies S of the above reef. From midway of the entrance, the top of the church at the town of Carmen is visible over the trees on a bearing 294°.

A drying reef extends from the shore toward the center of the entrance and forms the S side of Port Carmen. The channel N of this reef has a least width of about 91m and leads to the anchorage at Port Carmen.

A prominent clump of mangrove stands on the edge of the reef extending S from Poo Point, and immediately W of the clump is a well-defined sand-spit which dries about 0.6m; the spit can be rounded close-to.

Inside the port, the water is usually muddy and only at LW do the reefs show plainly. A large cement factory with two tall stacks stands about 0.8 mile WSW of Poo Point.

A beacon stands in a clump of mangrove. Caution should be used by vessels entering without local knowledge, being guided principally by the color of the water on the steep-to reefs. Fish weirs are scattered over the shoal parts of the port and along the reefs.

The town of Carmen, situated on the W side of the port, is partly concealed by trees. The church has a nipa roof and can be seen over Poo Point from seaward and from the entrance of the port, but is obscured from the anchorage; it is not

prominent at any time. The municipal building is more conspicuous.

Cogon (10°36'N., 124°01'E.), a village at the head of the port, is situated about 0.5 mile N of Carmen, and the villages of Davis and Villa Hermosa stands on the shore 0.5 mile and 2 miles S, respectively, of Carmen. At Cogon there are two stone moles, partly destroyed, where small boats can land at HW.

Anchorage can be taken, in 9.1m, W of the above-described clumps of mangrove, or about 183m farther N, in 7 or 8m. The edge of the reefs fringing the anchorages are steep-to.

6.111 Catadman Point (10°33'N., 124°04'E.) is formed by a wide, steep-to coastal reef heavily overgrown by mangrove that extends for 1 mile in either direction, giving it the appearance of land. It is quite conspicuous from N or S.

Danao (10°31'N., 124°01'E.) is the largest and most important town in northern Cebu. The cream colored church standing on low ground near the beach is prominent. The church and surrounding buildings form a large group, but they are partly obscured by coconut groves N and S of them and are only visible between 220 and 350 .Prominent factories stand 5 miles N and 2 miles S of the city.

The beach in front of the town is of dark sand. There is a small pier at Danao.

The pier was partially destroyed by a typhoon and was being rebuilt.

A large shipyard and industrial complex was under construction in the vicinity of Danao.

Anchorage can be taken, in 37m, mud and sand, E of the church and about 0.3 mile offshore; it is exposed during the Northeast Monsoon.

Danao Point (10°30'N., 124°02'E.), about 1 mile S of Danao, has a bare and steep appearance. The point is fringed by a dark, steep-to reef of moderate width.

Compostela (10°27'N., 124°00'E.), a town located about 3 miles S of Danao Point, has a church that stands on the beach. The town is visible only between the bearings of 294° and 350° because of the thick coconut groves bordering the coast in this area.

The ruins of a concrete railroad bridge, 0.5 mile N of Compostela, is visible from seaward. The shore for 3 miles N and for 1 mile S of Compostela is fringed by an almost unbroken narrow, steep-to reef. There is little sand beach, the remainder of the coast being bordered mostly by gravel and a few stretches of rocky ledges.

Kotkot Point (10°25'N., 124°00'E.) is low and not prominent except from N. Between Kotkot Point and the town of Liloan, about 1.3 miles S, there is a stretch of prominent beach.

Liloan (10°24'N., 124°00'E.) lies at the head of a wide bay which indents the coast for about 0.8 mile between Kotkot Point and Bagacay Point. The bay is open to the Northeast Monsoon. A large church with a galvanized iron roof stands close to the beach.

The town is situated in back of the church and along the side of a channel, known as the Liloan River, which connects Silut Lagoon with the sea. A rock lies awash on a small reef about 0.3 mile NE of the church at Liloan.

Bagacay Point (10°23'N., 124°01'E.), about 1.3 miles SE of Liloan, is further described in paragraph 7.32.

Camotes Sea—East Part

6.112 Camotes Islands (10°41'N., 124°25'E.), consisting of Ponson Island, Poro Island, Pacijan Island, and Talong Island are in general, fringed by narrow, steep-to reefs. There are no good anchorages in the group.

The island group is of little commercial importance and only a few vessels call at the larger towns.

Pacijan Island (10°40'N., 124°20'E.) is 247m high in the S part, and near the N part there is a small flat hill, 102m high. San Francisco, a town situated near the E extremity of Pacijan Island, is connected to Poro Island by a bridge.

Drying reefs extend N and S from the bridge for about 1 mile in either direction. Cargo for San Francisco is landed at the town of Poro on Poro Island; a road, about 2 miles long, joins the two towns. There are postal and radio facilities at San Francisco.

Talong Island (10°44'N., 124°19'E.), lies about 0.3 mile N of Pacijan Island. The navigable channel between them is reduced to a width of about 274m by the reefs on either side.

Tudela (10°38'N., 124°28'E.) is a small town on the S side of Poro Island. A light is shown from a concrete tower, 10m high, which stands on the E side of the town.

A stone landing at Tudela, with a depth of 1.2m off its end, can be used by small boats.

There are postal and telephone facilities at Tudela and bus transportation to San Francisco.

Anchorage can be taken, in depths between 13 to 27m, mud and coral, about 366m offshore S of the town. This is the best anchorage in the Camotes Islands group, but it is open to S winds. There is anchorage off Poro similar to that at Tudela; however, it also is exposed to S winds.

6.113 Poro (10°38'N., 124°24'E.), a town about 3.75 miles W of Tudela, has a church that is prominent from SW. A stone causeway fronting the town is accessible to small boats only.

Hermosa Bank is a small, detached coral patch, with a depth of 11.9m and steep-to, lying about 1 mile E of Villa Hermosa Point, the E extremity of Poro Island.

Ponson Island (10°47'N., 124°33'E.) is the most northerly of the group. It is 221m high and fringed by a narrow coral reef, except on its NE side, where the reef extends 1097m from a shallow bay.

Kawit is a village situated on a conspicuous sandy beach at the SW extremity of Ponson Island.

Anchorage can be taken off Kawit but, close in because of the great depths. This anchorage should be approached with caution as the bank is very steep. In case of necessity, anchorage can be taken off the villages of Lanao or Dapdap, which are located on the NW coast of Ponson Island.

Pilar (10°48'N., 124°34'E.) (World Port Index No. 58760), a town at the NE end of Ponson Island, has a stone mole with a concrete landing, extending from the beach E of the town. The controlling depth off the landing was 1.8m.

A dangerous shoal, having a depth of 0.6m at MLW, extends from the shore to a position about 30m SE of the end of the causeway.

Boats calling here head in parallel to the line of the causeway and for the NE corner.

In fine weather, anchorage can be taken off the end of the mole, in depths between 35 to 37m.

6.114 Dulhugan Point (10°55'N., 124°23'E.) is low and flat. Mangrove grows on the reef W of Dulhugan Point and surrounds a small islet lying about 0.8 mile offshore, giving it the appearance of forming a part of the point. The S side of the point is steep-to.

Dupon Bay (10°55'N., 124°25'E.), entered between Sacay Point, situated 1.75 miles E of Dulhugan Point, and Catiyoman Point, about 1.5 miles farther SSE, is a spacious harbor. The entrance is deep, the depths decreasing toward the head which is foul. It was reported (1999) that the tidal current in the bay is negligible, but a strong current is reported to set E along the coastline outside of the bay.

Isabel (10°56'N., 124°26'E.), marked by a lighted tower, is a town located on the E side of Dupon Bay. The light is shown from a concrete tower, 10m high, standing on the shore at Isabel. Red obstruction lights are shown from a chimney (red and white) standing 1.5 miles SE of the light.

Depths—Limitations.—Port Isabel, in the SE part of Dupon Bay, has been developed to serve local fertilizer and copper swelting plants. A vessel of 64,000 dwt has been handled at the port.

Philiphos Wharf has five berths totaling 760m in length for grab discharge of bulk cargo and loading of bagged and bulk fertilizer. The S end of the main quay is reported to be used for discharge of liquid ammonia, sulfuric acid, and phosphoric acid.

Reported depths alongside the berths are, as follows:

1. Berth No.1—12m
2. Berth No.2—9m
3. Berth No.3—7m
4. Berth No.4—7m
5. Berth No.5—5m

Passar Wharf is situated close S of the Philiphos Berth No.1, and is reported to be 90m in length, with a depth of 12m alongside. Ore for the copper smelting plant is discharged at this berth.

Two tugs of 6,000 horsepower are available. There are three grab cranes feeding conveyor belt systems. Cranes are also available for loading.

Fuel and diesel oil can be supplied by barge from Cebu.

Since this area is on the W side of Leyte it is protected from the direct influence of a typhoon by the central mountain range running from N to S.

The prevailing winds are from NNW, SSW, and NNE. The SSW winds, which occur frequently from March to August, cause wave action at the wharf.

Pilotage.—Pilotage is compulsory and is available day or night. The boarding place is 1,372m SW of Catiyoman Point. Pilots are provided by Tacloban Pilot Association, and 24 hours notice of ETA is required.

Anchorage.—Anchorage can be obtained, for vessels with drafts of between 9 and 30m, at the entrance to Dupon Bay.

Anchorage can also be obtained 0.5 mile from the W shore of the bay, in a depth of 15m, although it is advisable to use two anchors due to the poor holding ground.

The quarantine anchorage is situated about 1,463m W of Catiyoman Point, in a depth of about 80m.

Matlang Bay (11°53'N., 124°27'E.), about 1 mile E of Dupon Bay, is small and sheltered from all except S winds. The anchorage area is restricted by reefs extending from both sides and the head of the bay.

Mount Maanga (10°57'N., 124°30'E.) is a sharp, double-tipped peak and an excellent landmark from all directions. The N peak is the higher.

Calunangan Point (10°52'N., 124°31'E.), about 4.5 miles E of Matlang Bay, is low, flat, fringed by mangrove, and skirted by a very narrow, steep-to coral reef.

A light is shown from Calunangan 1 mile W of Calunangan Point.

6.115 Ormoc Bay (10°57'N., 124°35'E.), entered E of Calunangan Point, is deep and free from dangers.

Anchorage can be taken, in 15 to 27m, good holding ground, all around the shores of the bay.

Merida (10°55'N., 124°32'E.) (World Port Index No. 58790) is a small town on the W shore of the bay.

A concrete pier, on which there is a cargo shed, has a controlling depth of 1.8m off the end. A privately maintained fixed red light, 9.1m above HW, is shown from a stand in front of the cargo shed.

Port Bello (10°59'N., 124°32'E.) (World Port Index No. 58780), in the NW part of Ormoc Bay, affords anchorage during the Southwest Monsoon, in 17 to 22m, mud, off the end of the pier.

There is a stone causeway and wooden landing about 149m long at the Hacienda Puerto Bello. The small boats and lighters which call here for cargo lie at the S face of the pier near the outer end where there is a depth of 1.2m.

Vessels call here only by previous arrangement. The pier was reported badly in need of repairs and the hacienda was not in operation.

A dangerous wreck lies in Port Bello about 0.5 mile ENE of the village of Biasong.

6.116 Ormoc (11°00'N., 124°36'E.) (World Port Index No. 58770), at the NE part of Ormoc Bay, is the largest town in western Leyte and of some commercial importance.

A radio tower, 82m high and showing a red light, stands near the coast about 2.3 miles SE of Ormoc. Another radio tower, 61m high, stands near the coast about 1 mile SE of Ormoc.

Prominent landmarks in the approach to Ormoc include several chimneys situated about 2.3 miles SE of the town, a water tank about 0.8 mile SE of the town, and a church spire at the town.

A concrete city pier, about 12.2m wide at its outer end, extends about 341m SSW from the shore. There is a depth of about 4.5m at the outer end of the E side of the pier, but the water shoals rapidly along each side toward the shore.

It was reported difficult to go alongside because of the poor condition of the pier. A prominent building stands at the root of the pier. Six mooring buoys are laid in the bay 1 mile WNW of the root of the pier.

Anchorage can be taken, in 26 to 27m, sand and mud, about 0.3 mile SW of the pierhead.

Several sunken wrecks, swept to 11.9m, lie between the anchorage and the pier and should be avoided; caution must be

exercised not to get inside about the 20m curve when anchoring as the depths shoal rapidly.

From Ormoc to Baybay, about 22.5 miles SSE, the coast is low and consists of steep-to beaches of cobblestones and small boulders. Near the coast are heavily wooded hills, 305 to 610m high and immediately back of them is a mountain range, 914 to 1,219m high, lying parallel to the coast.

6.117 Panalian Point (10° 59'N., 124° 38'E.) is located about 1.8 miles SSE of Ormoc. The small landing, about 0.3 mile SE of the point, is reported destroyed. Its seaward end reportedly dried at LW. Vessels calling for cargo anchor in 12.8m, about 0.3 mile offshore, and load from lighters.

Albuera (10° 55'N., 124° 41'E.), lying about 7.5 miles SE of Ormoc and reportedly marked by a light, is visible from seaward. It has postal and telegraph facilities. A highway connects the town with Ormoc and Baybay.

Vessels from Cebu call occasionally.

Baybay (10° 41'N., 124° 48'E.) (World Port Index No. 58750), lying on the S side of the Pangbagaran River, about 15.5 miles S of Albuera and marked by a light, presents a prominent appearance from seaward. The light was recently reported extinguished.

The old stone church with one tower is a good landmark.

A concrete government pier, with about 73m of berthing space, had a reported controlling depth of 3.9m off its seaward end.

Anchorage can be taken, in 22 to 27m, mud, about 0.5 mile W of the town.

6.118 From Baybay, the coast trends S about 2 miles, then WNW about 1 mile, forming a bay between the town of Baybay and the reefs fringing **Catarman Point** (10° 38'N., 124° 47'E.).

A conspicuous hill, 96m high, stands close inland from the E shore of the bay. A small steep-to reef, with a depth of 1.8m, lies about 0.8 mile NNE of Catarman Point. The fringing reef extends 0.5 mile N from the point.

Good anchorage can be taken, in 11 to 18m, mud, E of the reef or off the village of Punpunan at the head of the bay.

A rock causeway is situated on the N side of Catarman Point, and is the loading site for manganese ore.

Between Catarman Point and the village of Guadalupe, 6 miles S, the coast consists of steep-to, coarse gravel beaches, backed by hills 183 to 610m high.

A reef, with a depth of 2.7m, lies about 0.8 mile WSW of Guadalupe, and another reef, which dries at LW, lies about 1 mile SW of the same position.

A depth of 2.7m, coral bottom, was reported to lie 326°, about 1.3 miles from Guadalupe.

Amogotada Point (10° 29'N., 124° 43'E.) is low, fringed by mangrove, and covered with coconut trees. Mount Bontoc, a very prominent flat-topped hill, 203m high and steep, is located about 1.5 miles SSE of the point. When first seen from N it appears as an island and is liable to be mistaken for low Amogotada Point.

Cuatro Islands (10° 31'N., 124° 39'E.) are a group for four islets lying W and NW of Amogotada Point. Himuquitan Islet, the S and largest, is conspicuous. Daquio Islet, the northernmost of the group, is low and sandy and about 12.2m high to the tops of the trees.

Hindang (10° 26'N., 124° 43'E.) a small town about 3 miles S of Amogotada Point, offers anchorage, in 13 to 18m about 0.5 mile offshore with the church bearing 141°. Hindang Light is shown from a fort at Hindang.

The small towns of Hilongos, Bato, Matalom, and the village of Cahagnaan are situated on the coast between Hindang and **Green Point** (10° 09'N., 124° 45'E.). There are postal and telegraph facilities at Hilongos, Bato, and Matalom.

Canigao Island (10° 15'N., 124° 45'E.) is low, flat, and covered with coconut palms.

The N, W, and S sides of the island are fringed by reefs extending up to 0.6 mile offshore. The island is marked by a light.

6.119 Canigao Channel (10° 15'N., 124° 43'E.), between Danajon Bank and Leyte, is over 6 miles wide, but is divided into several passes by Cain Reef, Adam Reef, Eve Reef, and Canigao Island. The pass between Canigao Island and Leyte is over 0.75 mile wide, has a depth of 18.3m, and is the one generally used.

Cain Reef (10° 15'N., 124° 43'E.), with a depth of 7.3m, lies 1.75 miles WNW of Canigao Island.

Adam Reef (10° 15'N., 124° 42'E.), with a depth of 0.3m, lies 2.5 miles W of Canigao Island. An 8.2m patch was reported to lie 1.5 miles WNW of Adam Reef.

Eve Reef (10° 14'N., 124° 44'E.), with a depth of 5.8m, lies 1.5 miles WSW of Canagao Island. Abel Reef, with a depth of 6.7m, lies 1.75 miles S of Canigao Island.

Taguus Point (10° 11'N., 124° 45'E.) lies about 3.5 mile S of Canigao Island.

A 2.7m coral patch is reported to lie 0.6 mile W of the point.

Green Point (10° 09'N., 124° 45'E.), lying 2 miles S of Taguus Point, is the SW extremity of Leyte and is reported to be clear of dangers. Green Cone, a hill 140m high, located close E of the point, is prominent.

Camotes Sea—South Part

6.120 Lapinin Island (10° 06'N., 124° 34'E.), lying close off the NE end of Bohol, is generally low, but of rugged appearance. It has a wide rice-cultivated flat broken by low, conspicuous hills covered with grass.

A well-defined hill, 129m high, lies close within the S end of the island. Its coasts are indented by several mangrove-fringed bays, except in a few places where there are small stretches of sand beach, and are bordered by reefs.

There are no rivers, the openings in the mangrove extending only a short distance inland. Three small islets, Bonoon, Budlaan, and Pamasaun lie on the reef fringing the N side of Lapinin Island.

Tinuibo Island, 121m high, lies about 2 miles SE of Tugas Point, the NE extremity of Lapinin Island. A light is shown from the point.

Basiao Channel (10° 04'N., 124° 32'E.) is about 0.5 mile wide and tortuous. At the NW end of the channel is Lapinin Chico Islet, fringed with mangrove.

From the E entrance, a mid-channel course in a depth of 5.5m can be carried to within about 1 mile of the islet.

A sandbar, bare at half tide, connects the islet with a sand spit lying about 0.8 mile SE of Lapinin Chico Islet, and then divides the channel into two arms at this position.

There is a depth of 4.6m in the NW arm. The other arm, which extends N, has a controlling depth of 2.7m.

It is foul and should not be attempted without local knowledge.

A rock, which lies awash about 274m S of Lapinin Chico Islet, has a depth of 4.6m close off its S side. On the opposite side of channel, about 0.5 mile S of the rock, a small rock lies in 2.7m at LW.

Anchorage.—Excellent, but limited anchorage can be taken in Basiao Channel, in 5 to 9m, sand and rock.

A rock causeway and a concrete pier, 142m in length, with a depth of 4.2m at its outer end, stands on the SW shore of Basiao Channel at **Tapal** (10° 03'N., 124° 31'E.).

The latter place serves as the port of the town Ubay, located about 3 miles W of the pier, and is connected to it by a highway.

Bohol—North Coast

6.121 Centinela Point (10° 05'N., 124° 30'E.), the N coast of the island trends irregularly WNW about 14.5 miles to Tabon Point, the N extremity, then W about 8.5 miles to Corte Point.

This shoreline is mostly fringed by mangrove and bordered by a bank that extends a considerable distance offshore in places.

Mount Cogtong (9° 57'N., 124° 29'E.), in the NE part of Bohol, is a 459m high, prominent, grass-covered, double peak. Westward of the Cogtong Mountains is a large valley extending in a W direction along the coast to the **Ipil River** (10° 07'N., 124° 21'E.) and S between the Cogtong Mountains and Mount Batuanan.

The latter mountain is the E termination of the long E-W ridge SW of the Cogtong Mountains. It descends with a clifflike abruptness to the E and presents an easily distinguished landmark.

Westward of the Ipil River, a belt of gentle rolling country extends inland from the coast for 1 to 3 miles, narrowing to the W. Southward of this belt are rounded hills, 183 to 274m high.

Cantamulig Hill (10° 09'N., 124° 15'E.), the most northerly of the hills in this vicinity, is situated 2.75 miles SW of Tabon Point. It has a long, sloping shoulder extending NNW from its summit. The hill is conspicuous from E or W.

Mount Corte (10° 08'N., 124° 09'E.) is a rounded-top grassy hill. It has a long shoulder extending about 1 mile S and terminating abruptly at the village of Corte.

Bohol—Off-lying Islands

6.122 Danajon Bank (10° 17'N., 124° 30'E.) is an extensive area lying off the N side of Bohol. Its N limit is marked by a chain of steep-to reefs 0.5 to 2 miles wide.

The only islets lying on these N reefs, other than **Pandanon Islet** (10° 11'N., 124° 05'E.), are the two Caubyan Islets lying up to about 8 miles N of Corte Point; Danajon Islet, about 6.8 miles N of Tugas Point, the NE extremity of Lapinin Island; and the three Tood Islets lying about 2.3 miles E of Danajon Islet.

The Caubyan Islets are small, low, and partly wooded; Danajon Islet is very small; the Tood Islets are small, sandy, and have some low vegetation on them. There are some trees and houses on Danajon Islet. There are some huts on the southernmost of the Tood Islets.

Danajon Bank can be approached from either E or W, or through several breaks in the outer reefs. The greater part of these outer reefs bare at LW; because of the coral sand they are usually easily seen under favorable conditions.

On Danajon Bank, within these reefs, there are a number of low, wooded islands and islets as well as numerous detached reefs, some of which dry. Between them are many intricate and tortuous channels which should not be attempted without local knowledge.

The shoals and reefs on the bank are not indicated by a change in color of the water, and in the most favorable light show as brown patches which can scarcely be distinguished from cloud shadows.

This is attributed to the presence of silt in the water and the absence of coral sand.

6.123 Jinutangan Island (10° 14'N., 124° 29'E.), Nunu Island, Malingui Island, and Gindacpan Island have coconut groves of various sizes; scattered coconut palms stand on the other islands. Most of the outer islands have sandy beaches while those close to Bohol are usually fringed by mangrove.

Calituban Reef, with its E extremity located about 1 mile NE of **Calituban Island** (10° 15'N., 124° 18'E.), extends about 13.5 miles WSW. It is similar to the outer reef on the N side of Danajon Bank and roughly parallel to it. It shows up well because of the coral sand and is steep-to, the 10m curve lying close-off its edges and deepening abruptly beyond it.

Between Calituban and Banacon Islands are long sand banks, bare at LW, on which stand many fishing huts on piles.

Caution.—The area bounded roughly by Talaban Island, Nunu Island, Maumaun Island, Macaina Island, and the E ends of Jau Island and Saae Island should be considered dangerous and navigable only by small craft using caution.

There are depths for fairly large vessels in the narrow channels, but reefs, discolored water, and strong currents render the area unsafe for navigation with exception of the channel W of Malingui Island and Maumann Island S of Sagasay Island. Foul ground, on which lie drying-reef patches, extends about 2 miles SE from Nunu Island.

Strong variable currents make the greater part of Danajon Bank unsafe for other than very small vessels.

6.124 Danajon Bank can be approached through Basiao Channel which separates Lapinin Island from Bohol; the channel N of Lapinin Island; Northeast Pass, a break in the outer reef; Middle Pass, a smaller but similar break in the outer reef; and **Northwest Pass** (10° 10'N., 124° 04'E.), between the reefs fringing Pandanon and Cabulan Islets.

A narrow entrance channel, with a depth of 4.6m, is situated about 1.3 miles NW of Northeast Pass. The channel is of little importance and it use is not recommended.

Talibon (10° 09'N., 124° 20'E.), about 12 miles WNW of the W entrance to Basiao Channel, has a stone landing for small boats. The church in the town is large and prominent and the roof of the public market shows well coming from the N.

There is bus connection with other towns on Bohol. There are postal and telegraph facilities at Talibon. A light is shown at Talibon.

The harbor at **Jetafe** (10° 09'N., 124° 09'E.)(World Port Index No. 58845) is sheltered and has depths of 7 to 20m, mud. The stone causeway is T-shaped and about 293m long and 9.1m wide. The old landing to the W is in ruins.

Anchorage can be taken, in 20.1m, offshore of the stone causeway NE of the town.

Middle Pass (10° 18'N., 124° 15'E.)is a narrow channel about 274m wide with a least reported depth of 5.8m.

Unless familiar with the channel, it should not be attempted when the reefs do not show well. The deeper water will be found on the W side of the channel; spits extend a short distance from the W reef at the inner and outer ends of the pass.

Bohol—East Coast

6.125 The E coast of Bohol, between Basiao Channel and the village of Cogling, about 3 miles S, is mostly fringed by mangrove except in the vicinity of the village where it is rocky. There are a number of small patches, with depths of 3 to 9m, off this section of coast.

Kabulao Bay (9° 56'N., 124° 33'E.), lying between Huagdon Point and Kabulao Point, nearly 4 miles S, is encumbered with reefs, as are its approaches. Its shores are fringed by mangrove.

Kabulao Point (9° 55'N., 124° 34'E.), separating Kabulao Bay from Cogtong Bay, is a bold, wooded promontory rising to a height of 145m about 0.3 mile inland. Its seaward side is clear and steep-to, but its N and S sides are fringed with reefs which gradually widen toward the inner side of the bays.

Cogtong Bay (9° 51'N., 124° 32'E.), lying between Kabulao Point and Lamanoc Point, 6.5 miles SSE, is nearly blocked by Lumislis Islet, Tabangdio Islet, Calangaman Islet, and Catiil Islet. These islets are all low, mangrove covered, and connected with the shore by reefs which bare at LW.

Lamanoc Point (9° 48'N., 124° 36'E.) consists of low rocky cliffs and forms a very prominent coastal projection. Three rocky islets lie close offshore on the narrow reef fringing the point.

Between Lamanoc Point and Agio Point, about 2.8 miles S, the coast recedes W forming a bight blocked by coastal reef on which is a scattered growth of mangrove.

Leyte—South Coast

6.126 Off the S end of Limasawa Island, the flood current sets NW and the ebb current sets SE, sometimes attaining great velocity. During the Southwest Monsoon, heavy swells are prevalent off the S coast of Leyte.

Green Point (10° 09'N., 124° 45'E.), the SW extremity of Leyte, is made prominent by Green Cone, 140m high, nearly 1 mile E of it.

Between Green Point and the town of Maasin, about 5 miles ESE, is a broad coastal reef extending offshore more than 0.25 mile in places. Behind this reef the shore is bordered by mangrove.

From the town of Looc, 1.5 miles SE of Green Point, to Maasin, the mangrove fringed coast is backed by a narrowing coastal plain which rises into lightly timbered hills.

Near Looc, a low rock spur projects into the sea from the face of a steep cliff.

About 1 mile farther SE is the mouth of the mangrove-lined Looc River.

Maasin (10° 08'N., 124° 50'E.)(World Port Index No. 58740) is located on a small plain in back of which is a semicircle of hills, the highest being 170m and standing about 1 mile NE of the town. Sharp Peak, 366m high, is prominent in a trio of hills more than 2 miles NNE of Maasin. The town is protected by a seawall from which a wide coral reef extends about 366m S.

Eastward of the reef is a wooden pier, with a depth of 5.8m at its outer end and shoaling gradually to 2.1m at the inshore pile clusters.

Vessels using the pier should take care to avoid a submerged wreck lying about 15m eastward of the seaward end. The pier is exposed to winds from E to SE and is usable only during the Northeast Monsoon.

Steering for the light on a bearing of 328° leads to the pier, or to the anchorage, in 9 to 11m, SE of the town.

Small craft can anchor closer in, off the NE part of the reef, in 5 to 7m, sticky bottom. The church at Maasin is prominent.

Eastward of Maasin the coastal section extends through sparse coconut plantations to San Roque, with hills in the back country. Amparo Point, 4.5 miles SE of Maasin, is covered with coconut trees.

Between San Jaoquin, 5.5 miles SE of Maasin, and Macrohon, 1.5 miles farther SE, there is a stretch of flat sandy beach, about 1.5 miles long, paralleled by a coastal road practically on the beach.

There is a narrow cobblestone beach at Macrohon; post office and telegraph facilities are located in the town.

Tancaan Point (10° 00'N., 125° 01'E.), located about 9 miles SE of Amparo Point, is a low rock formation underworn by the sea. It is fringed by a narrow, steep-to reef, outside of which the depths increase rapidly, with 18.3m being found within 0.3 mile of the point.

Tancaan Point is the S termination of a low, wooded peninsula about 1.5 miles long. The N part of the peninsula consists of mangrove swamp.

Limasawa Island (9° 56'N., 125° 04'E.), 3 miles S of Tancaan Point, from which it is separated by a clear, deep channel, is well-wooded. The island is fringed by a narrow, steep-to reef, but depths outside the reef are too great to afford good anchorage for large vessels. The W part of Limasawa Island is well populated and much of the land is planted to hemp and coconut trees.

An 8.5m coral reef, lying about 1.3 miles NNE of the S extremity of the island, is the only known detached danger. A light marks the N extremity of the island.

6.127 Sogod Bay (10° 15'N., 125° 00'E.) is entered between Tancaan Point, Leyte, and Ilijan Point on Panaon Island. The bay is free of dangers and usually calm, but offers no good anchorages with sufficient swinging room, except for the smallest class of vessels, because of the great depths.

Between Tancaan Point and the San Jose River, about 8.5 miles N, the beach is backed by a narrow strip of scattered

palms behind which rise between 274 to 366m at a distance 1 mile inland.

Malitbog (10° 10'N., 125° 00'E.) (World Port Index No. 58730) is a small town on the W shore of Sogod Bay. A privately-owned pontoon pier, with a reported depth of 2.7m, is located at Malitbog. Wrecks are reported to lie along the N side of this pontoon pier.

The best anchorage is in 27m, hard sand, just N of this pier. A large white building is prominent from well offshore.

There are two additional piers further N of the above pontoon pier. The S pier has a depth of 6.4m at its head, and the N pier a depth of 3.3m at its head.

Southwestward and NNW of Malitbog there are large coconut plantations. The coastal plain is up to 0.5 mile wide and 2.5 miles long.

The W boundary of the plain is another ridge of mountains. Mount Savejon, 288m high, is located 2 miles WNW of Malitbog. Broken hills behind the coast, 213 to 274m high, extend to the head of Sogod Bay.

Anchorage.—Anchorage can be taken, in 31m, sand and coral, in a bight about 9.5 miles N of Malitbog and close N of the village of Banday.

A bight immediately N of the village of Bontoc, nearly 3 miles N of Banday, offers refuge during periods of typhoon weather to coasting vessels.

A stone causeway, about 24m long, extends off Bontoc.

6.128 Sogod (10° 23'N., 124° 59'E.) (World Port Index No. 58720), a town at the head of Sogod Bay, is located on a flat coastal plain about 2 miles in extent. The Pandan River empties through the E part of the area, entering the bay by a delta having five mouths. Rice paddies and coconut plantations occupy the river flats in this vicinity. The town of Consolacion is situated about 1 mile E of Sogod.

Both Sogod and Consolacion have considerable trade and are regular ports of call for coastal vessels. The pier at Sogod has a depth of 4.2m off its seaward end. Anchorage can be taken, in 64m, mud, about 0.3 mile off the end of the pier.

The terrain on the E side of Sogod Bay, as far as Panaon Strait, consists of a central mountain range forming the backbone of the peninsula.

Mount Bitanhuan, 6 miles ESE of Sogod, and Mount Gascat, 411m high at the S end of the range, are prominent peaks. There are no extensive coastal plains.

Libagon (10° 18'N., 125° 03'E.), a town on the E shore of Sogod Bay, about 5.75 miles SSE of Consolacion, is a regular port of call for coasting vessels.

6.129 Panaon Island (10° 05'N., 125° 10'E.) is divided throughout its length by a mountainous ridge which rises to Mount Baganting, near the N end of the island, and terminates with Mount Nelangcapan, which forms the S end of the island. The W coast of the island is open to the Southwest Monsoon.

With the exception of Liloan Bay, there are no good anchorages; coasting vessels call off the larger towns.

Panaon Strait (10° 10'N., 125° 08'E.) has a width of about 82m in the narrowest part where the depth near the middle is about 11m, but is constricted by a bank extending about 55m from the S shore and having a depth of 5.5m at its outer edge.

Tidal currents in the strait run at a rate of 3 to 4 knots at springs. There are strong eddies and whirlpools at either entrance.

Caution.—A bridge, with a vertical clearance of 13.7m, crosses the strait. The bridge is prominent from seaward.

The E entrance of the strait is somewhat encumbered by shoals, with a least depth of 2.7m at a position about in mid-channel, 0.25 mile E of the narrows.

Coasting steamers using the strait usually pass S of this 2.7m spot and favor the Panaon Island side to avoid the stronger current and whirlpools on the Leyte side.

A sunken wreck, reported to be marked by a small drum, lies in the middle of the E part of the strait about 0.1 mile E of the narrows.

A detached rocky patch lies in the W approach to the strait in a position slightly more then 0.3 mile W of the N extremity of Panaon Island.

Vessels should pass S of this patch to avoid the foul ground between it and the coast of Leyte.

6.130 Liloan Bay (10° 10'N., 125° 07'E.) lies close SW of the W entrance of Panaon Strait.

A light is shown from a concrete column on the extremity of the W entrance point of Liloan Bay.

A reef extends about 91m N and NE from the W entrance of the bay, and the head of the bay is fringed by reefs extending more than 137m offshore.

Liloan (10° 10'N., 125° 07'E.) (World Port Index No. 58710), a small town on the SW shore of Liloan Bay, is easy of access.

There is a pier with a reported depth of 4.3m off its outer end.

Anchorage can be taken by small vessels, in 12.8m, sand and coral, about 0.1 mile NE of the pier.

Liloan Point, the W entrance point of the bay, can be rounded at a distance of about 0.1 mile; then haul S for the anchorage.